

THE BIRDS OF WASHINGTON





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The Birds of Washington

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BONAPARTE'S GULL

3/7 LIFE SIZE

FROM A WATER-COLOR PAINTING BY ALLAN BROOKS

THE BIRDS OF WASHINGTON

A COMPLETE, SCIENTIFIC AND
POPULAR ACCOUNT OF THE 372 SPECIES OF BIRDS
FOUND IN THE STATE

BY

WILLIAM LEON DAWSON, A. M., B. D., of Seattle

AUTHOR OF "THE BIRDS OF OHIO"

ASSISTED BY

JOHN HOOPER BOWLES, of Tacoma

ILLUSTRATED BY MORE THAN 300 ORIGINAL HALF-TONES OF BIRDS IN LIFE, NESTS,
EGGS, AND FAVORITE HAUNTS, FROM PHOTOGRAPHS BY THE
AUTHOR AND OTHERS.

TOGETHER WITH 40 DRAWINGS IN THE TEXT AND A SERIES OF
FULL-PAGE COLOR-PLATES.

BY

ALLAN BROOKS

ORIGINAL EDITION

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VOLUME II

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The Birds of Washington

VOL. II.

Description of Species Nos. 182-372

THE BIRDS OF WASHINGTON.

No. 182.

LONG-EARED OWL.

A. O. U. No. 366. *Asio wilsonianus* (Less.).

Description.—*Adult*: Above finely mottled white and dusky, with apparently half-concealed ochraceous on subterminal margins of feathers, the design broadened on wings,—ochraceous, white, and dusky in patches; the wing-quills and tail distinctly barred,—dusky with ochraceous basally, dusky with gray terminally; ear-tufts conspicuous, an inch or more in length, black centrally, with white and ochraceous edges; facial disk tawny, gray centrally, and blackish about eyes on inner side, the edges finely mottled black and white; tibiae, tarsi, and feet pale tawny, immaculate; remaining underparts white, ochraceous, and dusky, in bold, free pattern, and upper breast distinctly and heavily streaked, the sides and flanks distinctly barred, the belly exhibiting a combination of the two types; lining of wing pale tawny, unmarked basally, save for a dusky patch on tips of coverts, heavily barred distally; bill and toe-nails blackish. The folded wings exceed the tail, and the bill is nearly concealed by black and white bristles. Length 13.00-16.00 (330.2-406.4); wing 11.25-12.00 (285.8-304.8); tail 5.75-6.25 (146.1-158.8); tarsus 1.50-1.80 (38.1-45.7); bill from nostril .63 (16).

Recognition Marks.—Little Hawk to Crow size; a strongly marked and unmistakable species; the "horns" taken in connection with its size are sufficient to identify it.

Nesting.—*Nest*: usually a deserted nest of Crow, Magpie, Heron, etc.; sometimes in rock-rifts or even on the ground. *Eggs*: 3-6, subspherical, white (or not infrequently red-spotted with nest-marks). Av. size, 1.60 x 1.29 (40.6 x 32.8). *Season*: c. May 1; one brood.

General Range.—Temperate North America, south to the tablelands of Mexico. Breeds thruout its range.

Range in Washington.—Common resident east of the Cascades, less common in winter; rare west of the mountains, during migrations only.

Authorities.—? *Otus wilsonianus*, **Cassin**, "Illustrations," (1856) p. 182. *Asio americanus* **Brewster**, B. N. O. C. VII. 1882, p. 27. T. C&S. Rh. D¹. D². Ss¹. B.

Specimens.—U. or W. P. Prov. C. B.N.

OWING to the fact that this Owl is strictly nocturnal in its habits, more so perhaps than in the case of any other species, what may be learned of it other than at nesting time can be written on the fly-leaf of a pocket-book. A glimpse of it west of the Cascades is a mere lucky accident, for cover abounds and the bird rarely indulges its low-sounding *hoo-hoo*. Upon the East-side, however, the bird is obliged to find shelter in willow or aspen groves, and if closely approached, unless certain of detection, will rely rather upon its protective coloration than flight for safety. As Mr. Bowles says, "In coloring they so closely resemble the bark of the trees that the



Taken in Walla Walla County.

Photo by the Author.

LONG-EARED OWL, FEMALE.

THE PLUMICORNS ARE DEPRESSED, AS IS CUSTOMARY IN ANXIETY.

sharpest eye often fails to distinguish them. I have stared for some time at what I knew *must* be an owl until gradually its outlines appeared, much as when one develops a photographic negative. They seem to know this instinctively, and when a human being appears stretch themselves

straight upward and remain motionless. In this position the resemblance to the stub of a broken limb is remarkable."

In my experience of these birds in Yakima, Benton, Chelan, and Okanogan Counties, deserted nests of the Magpie or Crow were invariably used by the Owls, and then only those to be found at moderate heights in swamp-willow thickets or groves of quaking asp. April is the nesting month and

April 10th is the date for fresh eggs, but others, possibly second sets, have been taken in June. The eggs, from four to six in number, are normally of a delicate clear white, but they soon become nest-stained and are often blood-marked. Both parents are usually at home and actively interested in their nest. One instance will suffice. Having sighted a likely looking Crow's nest about ten feet up in a willow clump of a swamp bordering Lake Chelan, I made towards it. Upon my approach an Owl slipped noiselessly from the nest and left me to plan the ascent



Taken in Benton County.

Photo by the Author.

A NESTING SITE OF THE LONG-EARED OWL.

thru an ugly tangle of saplings. As I started in I heard the overture of a caterwauling contest, just as when Thomas remarks, "*W'e-a-o-o-a-ow*," and Nature catches her breath to hear what Maria will say. I paused and canvassed the morale of my contemplated action; then hastily reviewed the chances of wild-cats; and then reached for my gun. Not until I had actually seen the mother bird, for it was she, emitting one of those gruesome squalls, could I believe that the noise came from an Owl. Even after doubt was at rest, the cry seemed not less like the snarl of an angry feline. To add to the terrors of the defensive, the husband and father came up and literally pro-

ceeded to spread himself. Wings and tail were spread to the utmost, and every feather was ruffled to the fullest extent,—all in a manner calculated to strike terror to the boldest heart. The bird-man managed to control his nerves long enough to note five eggs—but of what color deponent saith not—then hurriedly sought more congenial company.

At another time, as I was picking my way across a willow-skirted brook in the Yakima country, I became aware of, rather than discovered, a wee, shriveled, craven, ill-fed Owl, a bird



*Taken in
Benton County.*

Photo by the Author

NEST AND EGGS OF LONG-EARED OWL.

THE FOUNDATION IS AN OLD NEST OF THE MAGPIE FROM WHICH THE ROOF
HAS BEEN REMOVED.

which evidently at the time desired nothing so ardently as to be able to find a ready-made hole in the atmosphere and to crawl into it. I debated with myself whether it might be an undersized Long-eared Owl. There was nothing but the ear-tufts to show for it, for the very face of the bird was pinched and wizened. I gazed until the bird made sure of detection. Presto, change! The pretended stick resumed her natural appearance and made off with a great clatter, only to fall upon the ground in the well-known "last stages." The interest of the bird-man always lies in the opposite direction from that being pursued by a self-wounded bird. The *owlet* sat about ten feet back of me in a clump of willows. Tho only half-grown, its countenance bore an expression of imperturbable gravity. After I had had my laugh out at his absurd solemnity, I approached the little fellow. *Psst!* Instantly there were about six of him. Every feather stood on end,—wings extended, eyes blazing, bill snapping. Goodness gracious! Suppose he had been about forty times bigger yet! He wore my cap gracefully enough until we got down on the ground and could hobnob in the open. There he nibbled meditatively at the visor of his cap cage, and mumbled little incoherent bad words between his teeth. Anger is always amusing, especially if strictly harmless; the younger and the more helpless the exponent of it, the more ridiculous it is.

The food of the Long-eared Owl consists chiefly of mice and other rodents. Altho the night-patrol does make an occasional levy on the small-bird population, it deserves the strictest protection on account of its over-balancing services.

No. 183.

SHORT-EARED OWL.

A. O. U. No. 367. *Asio flammeus* (Pontoppidan).

Description.—*Adults:* Ear-tufts very short—scarcely noticeable; entire plumage, except facial disk, nearly uniform buff, ochraceous-buff or cream-buff, striped or mottled with dark brown,—heavily above and on breast, the stripes becoming more narrow on belly and disappearing altogether on legs and crissum; edge of wing white; the wing-quills and tail-feathers broadly barred with brownish dusky; the facial disk gray centrally, with black around each eye and on the bridge; bill and toe-nails dusky blue; eyes yellow; ear-opening enormous, but fully concealed; the wings fold just beyond the tail. *Immature:* Dark brown with ochraceous tips above; brownish-black face, and unstriped underparts. Length 14.00-16.75 (355.6-425.5); wing 12.00-13.00 (304.8-330.2); tail 5.50-6.25 (139.7-158.8); bill (chord of culmen) about 1.00 (25.4); tarsus 1.75 (44.5). Adult female larger than male. The preceding measurements include both sexes.

Recognition Marks.—Little Hawk to Crow size; general streaked appearance, dark brown on buff; inconspicuous ear-tufts; semi-terrestrial habits.

Nesting.—*Nest*: on the ground or at the end of a short, under-ground tunnel; a few sticks, grass, and feathers mark the spot, or else the bird lays on the bare earth. *Eggs*: 4-6, sometimes 7, subspherical. Av. size, 1.57 x 1.23 (39.9 x 31.2). *Season*: April; one brood.

General Range.—Thruout North America; nearly cosmopolitan. Breeds somewhat irregularly and locally, from about latitude 39° northward.

Range in Washington.—Not uncommon summer resident in lowlands east of the Cascades; migrant both sides of the Mountains; casual in winter.

Authorities.—*Otus brachyotus*, **Cassin**, "Illustrations," (1856) p. 183. T C&S. L². Rh. Sr. Ra. D². Kk. B. E.

Specimens.—(U. of W.) P¹. Prov. B. BN. E.

IN SECTIONS where all three birds are common, a rough and ready division of territory has been agreed upon by the Long-eared, Short-eared, and Burrowing Owls—*Ocellia est omnis divisa in partes tres*. To the Long-eared Owl has fallen the right to search groves, thickets, and piney woods; to the Burrowing Owl belong all pastures and the open sage; whilst the Short-eared has chosen meadows, rye grass areas, swampy bottoms, and all expanses of rush and reed. This equitable arrangement regards, of course, only Owls, for the last-named species has always a keenly contesting rival of his claims in the person of the Marsh Hawk, or Harrier (*Circus hudsonius*). So sharp has the rivalry become, to interpret the situation fancifully, that the Owl, no longer content with a monopoly of the night rights, hunts over the contested preserve on all cloudy days, and on some bright ones as well. Indeed, he has almost forgotten the family tradition which enjoins upon all good Owls careful avoidance of sunlight, and seems not at all disconcerted thereby.

Let no one suppose that because the bird under consideration has abbreviated ear-tufts, he is anywise "short" on hearing. On the contrary, his ear-parts are enormously developed. Part the feathers on the side of the head, bringing the ear-coverts forward, and you will see it, an ear-opening some two inches long—as long, in fact, as the skull is high, and proportionately broad.

It is more than a coincidence that these marsh prowlers, the Harrier and the Short-eared Owl, should be provided with such a remarkable auditory apparatus. When one considers the circumstances of their life, the reason for this common provision becomes very plain. In a thicket of reeds, especially if they be dry, one hears a great deal more than he is able to see. Movement thru grass or tules without noise is almost an impossibility, even for the tiniest bird or mouse. Hence, it becomes important to locate any creature in the tangle by hearing. Surely a Short-eared Owl could hear the footfall of a beetle at a hundred yards!

Short-eared Owls are somewhat hawk-like in their appearance, whether quartering to and fro across the meadows, or watching from a convenient

post. There is more flapping of wing than in the case of the Marsh Hawk, but the movement is absolutely noiseless, being hushed by the soft plumage of the axillaries and under wing-coverts. Now and then the bird, tiring of an exclusive swamp diet, goes poaching. Taking up a station upon the ground, it silently awaits the appearance of some timid gopher, which the Burrowing Owl has overlooked. In securing its smaller victims, the Owl does not pounce and tarry, but snatches in mid-flight, falcon-fashion, and retires to some favorite perch to eat.

Its food consists largely of meadow mice, gophers, and other rodents, supplemented by grasshoppers, crickets and beetles, with now and then a small bird. So great are its services to the rancher, and especially to the hay-maker, that the owner may well count it a piece of good fortune when a pair or a colony of them take up quarters in the alfalfa field. Better run the mower carefully around every nest than to suffer the "sage-rats" to continue their work of devastation.

These birds are largely migrant, summering chiefly to northward, and wintering further south. While they do not appear to move *en troupe*, like Blackbirds, suitable stretches of grass or tules offer a common attraction to the migrants, pausing to recruit the commissariat, and as many as two or three score may occasionally be seen at once hawking over a single swamp. Many do, nevertheless, breed with us, especially on the East-side. They are usually seen in pairs at all seasons, even during migrations, and Bendire considers that they are mated for life. Housekeeping is of the humblest, home being a mere shake-down of grass somewhere upon the ground; and it is only when the nest is threatened that the birds can muster "a weak whistling sort of note."

No. 184.

NORTHERN SPOTTED OWL.

A. O. U. No. 369 a. ***Strix occidentale caurina*** (Merriam).

Synonyms.—MERRIAM'S OWL. HOOT OWL. WOOD OWL.

Description.—*Adult*: No ear-tufts; above rich umber-brown, round-spotted in transverse rows (the remains of interrupted bars) of pale tawny or white, spotting least on head and back, pattern on wings and tail larger, but distal paired spots on primaries obsolescent; underparts heavily barred brown and whitish; wing-linings heavily spotted with dusky on a tawny ground; facial disk gray, with indistinct, dusky, concentric circles about each eye; bill yellow; iris yellow or brown. Length: 20.00 (508) or more; wing 12.75 (323.9); tail 8.44 (214.4); bill from cere .92 (23.4).

Recognition Marks.—Crow size; strikingly white-spotted; smaller and without "horns," as distinguished from the Dusky Horned Owl.

Nesting.—Not yet described—doubtless similar to that of *S. occidentale*, viz., nest in hollow tree or built on branch, of sticks, weeds, etc., lined with grass and feathers. *Eggs*: 3 or 4, white, rounded. Av. size 2.05 x 1.80 (52.1 x 45.7). *Season*: April; one brood.

General Range.—Coast region of Washington and British Columbia.

Range in Washington.—West-side from summit of Cascades to tide-water—rare resident.

Authorities.—*Syrnium occidentale*, Rhoads, Auk, N. Jan. '03, p. 17. Rh. B.

Specimens.—(U. of W.) B.

SIXTEEN species of Owls are accredited to the avifauna of Washington; yet with the solitary exception of the Burrowing Owl, who traffics in the open and who is always at home in season, there is none you may lay hands upon when wanted, and none whose acquaintance you may cultivate, except as favored by fickle fortune. Thus it comes about that certain species, known to be in the nature of the case not uncommon, are mere ornithological visions revealed in a moment to the lucky (and often unscrupulous) man with the gun, and veiled from the unfortunate by great depths of forests.

Mr. Bowles has seen this species only once, and I not at all. Rathbun, of Seattle, and Edson, of Bellingham, are likewise upon the waiting list. The first specimen, noted by Samuel N. Rhoads in 1892^a, was taken by Edwards Brothers, taxidermists, at a spot twelve miles east of Tacoma. Later^b, Dr. C. Hart Merriam elaborated this species on the basis of an adult female, taken at Mount Vernon on June 22, 1897, by E. A. Preble, of the Biological Survey, and reported its occurrence also in the Olympic Mountains.

The economy of this bird is quite that of the eastern Barred Owl, of which I copy a few notes^c: "The birds hunt mainly by night but often avail themselves of cloudy days and do not appear so nearly dazed as some in broad daylight. It is not unusual for the early bird-man to see the birds coming in from the meadows just before sunrise and making rapidly for the woods with that smoothly alternating flap-and-sail, which is characteristic of the bird.

"The ordinary challenge notes, delivered in a deep bass voice, consist of the theme, *who-who*, variously modified. *H'ho-who'*, *who-whoó-who*, is a common form, and one which may readily be imitated by blowing into the hands held conch-shaped.

"Barred Owls mate in February and nest either during the last week of that month or early in March. Usually some hollow tree in the depths of

a. Auk, Vol. X., Jan. 1893, p. 17.

b. Auk, Vol. XV., Jan. 1898, pp. 39, 40.

c. From "The Birds of Ohio," pp. 378, 379.

the woods is utilized, but not infrequently deserted nests of hawks and crows are pressed into service.

"The female attends chiefly to the duties of incubation, while soon after the young are able to leave the nest the male takes himself off to some hollow tree, there to gloom in sullen solitude for another year."

No. 185.

GREAT GRAY OWL.

A. O. U. No. 370. *Scotiaptex nebulosa* (Forster).

Description.—*Adult*: No ear-tufts; general plumage mottled, dusky, grayish brown, and dull whitish, darker above, lighter below, where the dusky markings are indistinctly longitudinal on breast and belly, and transverse on flanks, the whitish impure and with a fulvous element on the margin of the facial disk, hind neck, wings, tail, etc.; wing-quills and tail indistinctly barred; facial disk about six inches across, dusky gray, with numerous dusky lines imperfectly concentric about each eye; the edge of the disk dark brown and fulvous, and with more white below; the eyes bordered by black on the inner margin; iris yellow; bill pale yellow; feet and toes heavily feathered. Length 25.00-30.00 (63.5-76.2); wing 16.00-18.00 (40.6-45.7); tail 11.00-12.50 (27.9-31.7); bill with cere 1.40 (3.5).

Recognition Marks.—Size largest,—Brant size; gray face; absence of ear-tufts will immediately distinguish it from the Horned Owls.

Nesting.—Not known to breed in Washington. *Nest*: of sticks and moss, lined sparingly with down, placed high in trees, usually coniferous. *Eggs*: 2-4, white. Av. size, 2.16 x 1.71 (5.49 x 4.34). *Season*: April-June, according to latitude; one brood.

General Range.—Arctic America, straggling southward in winter thru the northern tier of states and on the Pacific slope south to northern California.

Range in Washington.—Rare winter visitor both sides of the Cascades, possibly resident in the mountains.

Authorities.—? Orn. Com., Journ. Ac. Nat. Sci. Phila. VII. 1837, 193. *Syrnium cinereum*, Gmelin, **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 56. T. C&S. L. Ra. E.

Specimens.—Prov. B. C. BN.

THIS giant Owl lacks the fierce aspect which horns impart and is really more mild-mannered than the Great Horned representatives. His domain is the forest areas of the "North Countree" up to the very limit of trees, and from thence he occasionally, but not commonly, flutters out upon the open marshes and tundras. Mr. Dall, while stationed upon the Yukon, found the birds "remarkably stupid," and declares that he has caught them by hand in the daytime. Certainly their flight is heavy and their motions far from graceful;

but the few specimens which straggle down this way in winter are never left long to their own devices. The most we know of them is that when folded away in the cabinet drawer they look like great gray babies, over-rash to have left the protection of the northern nursery.

Dr. Cooper killed a specimen of this Owl, a female, on the 10th of June, 1854, near Shoalwater Bay, at a spot described as "a brackish meadow, partially covered with small spruce trees," and he surmised from this circumstance that the birds nested in the vicinity. Mr. Lawrence reports^a the taking of a specimen near Ocosta, in May; and we have a clear account, from a layman, of the occurrence of two individuals of this species, in June, near Lake Kachees, in Kittitas County. It looks as tho it were not impossible, therefore, that the bird should breed within our limits. Suffice it to say that the man who takes its eggs in Washington will gain oölogical immortality.

No. 186.

RICHARDSON'S OWL.

A. O. U. No. 371. *Glaux funerea richardsoni* (Bonap.).

Synonym.—ARCTIC AMERICAN SAW-WHET OWL.

Description.—*Adult*: Upperparts nearly uniform dark brown spotted with white.—spots on top of head small and numerous, larger on hindneck where more or less confluent in collar, larger and more scarce on back and wing-coverts, occurring in pairs on wing-quills and tail-feathers; underparts white heavily streaked with color of back, markings tending to confluence on chest; flanks and tarsi buffy spotted with brown; facial disk chiefly white, but lores and eyelids blackish immediately surrounded with dark brown flecked with white. Bill *yellow* above, shading on sides. *Immature*: Upperparts brown without white spotting, save on tail and wings; facial disk uniformly dark, save for white of upper edge; underparts unmarked, plain brownish changing to buffy posteriorly. Measurements of the Glacier specimen: length 10.00 (254); wing 6.44 (163.6); tail 3.70 (94); tarsus .92 (23.4); culmen .60 (15.2)—smaller than the average.

Recognition Marks.—Robin size; without ear-tufts; heavily spotted above; finely white-spotted on crown, and tarsus spotted with brown as compared with *G. acadicus*, larger.

Nesting.—Much as in succeeding. Not known to breed in Washington.

General Range.—Arctic America, south in winter into the northern United States, westerly south to Colorado and Oregon. Breeds from the Gulf of St. Lawrence and Manitoba northward.

a. Auk, Vol. IX., Jan. 1892, p. 44.

Range in Washington.—Rare winter visitant, not impossibly summer resident in mountains.

Authorities.—*Cryptoglaux tengmalmi richardsoni*, Edson, Auk, Vol. XXV., Oct. 1908, p. 433. Dawson, Ibid, p. 84. (T). E.

Specimens.—C. E.

ALTHO bearing a close resemblance in both appearance and economy to the Saw-whet Owl, this diminutive mouser is, nevertheless, of strictly northern stock. The summer ranges of the two birds may possibly overlap somewhere in British Columbia, but the rare occurrence of *richardsoni* with us in winter marks the southern limit of occasional migration; while the Saw-whet Owl passes somewhat beyond our northern limits, only by courtesy of the projected mild climate.

On the Yukon the Eskimo call this little Owl Tuk-whe-ling-uk, "the blind one," because, owing to the unfitness of its eyes to endure daylight, it may easily be captured in the hand, when discovered closely ensconced in some thicket. The children make pets of them, and they soon learn to relish a diet of fish, in place of their accustomed fare of mice and birds. Nelson heard one utter a peculiar grating cry in the mating season, while Dall attributes to them cries like those of human beings. The eggs have only once been taken; and the manner of nesting, whether in deserted Woodpecker holes, or of "made" nests in thickets, is not certainly known.

No. 187.

SAW-WHET OWL.

A. O. U. No. 372. *Glaux acadicus* (Gmel.).

Description.—*Adult*: Without ear-tufts; upperparts dull reddish brown, the crown and lateral edges of disk narrowly streaked, and the remaining upperparts more or less broadly but sparingly *spotted* with white; below white, broadly and heavily streaked with cinnamon-rufous; legs, feet, and crissum tawny white or ochraceous, unmarked; facial disk white above, fulvous and brown below, the eyes black-margined, and the disk brown-edged below, contrasting with narrow pectoral white; facial disk blackish strongly contrasting with white eyebrows; iris yellow; bill black. *Immature*: Like adult, but without white spotting above; breast, like back and belly, ochraceous. Length 7.25-8.50 (184.2-215.9); wing 5.00-5.90 (127-149.9); tail 2.80-3.25 (71.1-82.6); bill including cere .66 (16.8).

Recognition Marks.—Chewink size but appearing larger; larger than Pygmy Owls (*Glaucidium gnoma* sp.); body longer, not chunky; tail not conspicuous nor held at angle; without ear-tufts as compared with *Otus asio* group.

Nesting.—*Nest*: in hollow trees, deserted woodpecker holes, etc. *Eggs*: 4-7, white, subspherical. Av. size, 1.20 x 1.00 (30.5 x 25.4). *Season*: April-June, according to altitude; one brood.

General Range.—North America at large, breeding from the Middle States northward, and in mountainous regions of the West southward into Mexico.

Range in Washington.—Imperfectly made out—at least not common resident east and west of the Cascades. (Specimen by Dr. Meyer of Portland taken Point Defiance, Wn.—A. W. Anthony *in epist.*, Jan. 20, 07.)

Authorities.—*Nyctale acadica*, Gmelin, **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 58. C&S. L^y. Rh. Ra.

Specimens.—1st. Prov.

BEING strictly nocturnal in its habits, it is not surprising that comparatively little is known even yet of this woodland recluse, altho it enjoys a wide distribution and is probably not uncommon. Several specimens have been recorded locally, and there is little doubt that the bird breeds in suitable localities thruout the State, yet its eggs have never been taken in Washington.

Theoretically, the abundant Flicker holes which abound in the moss-covered oaks of the Pierce County prairies should afford ideal nesting sites for Saw-whets, as well as appropriate retreats by day. Elsewhere, in default of such conveniences, the birds conceal themselves during the hours of daylight in dense thickets, or evergreen saplings. Dr. Ralph, of Utica, finds that under such circumstances they are not at all suspicious, and he has even stroked them with his hand as they were nodding sleepily in bush or tree.

The notes of the Saw-whet Owl have been compared to the "filing of a cross-cut saw"; and if this be a fair comparison, one would rather be excused from hearing them during certain of the "wee sma' hours." The principal note I have heard, however, is a rasping, querulous *sa-a-a-ay*, repeated by old and young with precisely the same accent, and inaudible at any distance above a hundred feet. Once, in Ohio, I came across a family party. Uncertain in the first instance, since the hour was late dusk, whether the dark silhouettes before me had "horns" or not, I tried the Screech Owl cry, and was greeted with a perfect chorus of *say's* from the youngsters, while the parents whined in a mystified way and flew back and forth near my head snapping their mandibles fiercely. Upon another occasion I succeeded in arousing one old bird and five owlets at an unusually early hour, viz., about twenty minutes after sunset. The smaller song birds were still astir and scolded vigorously at the appearance of these grim night watchmen; but the Owls gave no heed to their clamor, and were only intent upon discovering the whereabouts of their Cousin Screech Owl, who had summoned them. A parent bird was the first to discover the deception and she bent forward peering earnestly at me, and uttering a low mellow *cook* of comprehension, twice, after which the party withdrew.

No. 188.

NORTHWEST SAW-WHET OWL.

A. O. U. No. 372 a. *Glaux acadicus scotæus* (Osgood).

Description.—Similar to *G. acadicus*, but darker, more heavily marked below; flanks, legs, and feet more rufescent.

General Range.—Puget Sound region north (at least) to the Queen Charlotte Islands.

Range in Washington.—Not common resident on Puget Sound.

Authorities.—*Nyctale acadica*, Gmelin, Baird, Rep. Pac. R. R. Surv. IX, 1858, p. 58. *Cryptoglaux acadica scotæ*, Bowles, Auk, Vol. XXIII, Apr. 1906, p. 143.

Specimens.—B.

THIS alleged darker variety has been taken on Puget Sound, but there is not sufficient material in hand to determine whether it is the resident breeding form, or whether it is only a winter straggler from further north. The assignment of metes and bounds to such a quidity is more like a proposition in Euclid than a conclusion of inductive science.

No. 189.

KENNICOTT'S SCREECH OWL.

A. O. U. No. 373 d. *Otus asio kennicottii* (Elliot).

Synonyms.—PUGET SOUND SCREECH OWL (gray phase). LITTLE HORNED OWL. MOTTLED OWL.

Description.—*Adult*: With conspicuous ear-tufts; dichromatic. *Rufous phase.*—Above medium buffy brown to umber, or even dark sooty brown, darkest on crown and wings, more or less varied by dark streakings on feathers centrally; considerable buffy on scapulars, wing-coverts, and margins of primaries; wing-quills and tail finely and rather indistinctly dusky-barred; below white heavily blotched with umber, and heavily black-streaked on breast and sides, fading posteriorly; feet and legs completely feathered, more or less mottled with warm brown and buffy; facial disk grayish and rufous bordered by darker, but not highly differentiated from surrounding parts; iris yellow; bill yellow or dull gray, tipped with lighter. *Gray phase.*—Similar to preceding, but dark gray or pinkish gray instead of umber; pattern much more complex; each feather with dusky or rich brown central stripe, and cross-barred with the same color in fine wavy lines; this pattern beautifully carried out on the breast and the sides of the belly; the ground color of the upperparts ochraceous and of the underparts

white. Between these two phases there exists every gradation (the former, however, is much more common). They occur quite independently of age, sex, or season, both phases being sometimes represented in the same brood. *Young*: Heavily barred with dusky gray or dark brown and buffy white; no longitudinal markings. Length about 11.00 (279.4); wing about 7.00 (177.8); tail 4.00 (101.6).

Recognition Marks.—Robin size but appearing larger; feather-tufts with size distinctive in range; darker than *O. a. macfarlandi*.

Nesting.—*Nest*: an unlined cavity of tree or stump, often an old woodpecker hole. *Eggs*: 2-4, white, faintly glossed. Av. size, 1.62 x 1.33 (41.2 x 33.8). *Season*: c. April 15; one brood.

General Range.—Northwest coast region from Oregon to Sitka.

Range in Washington.—Common resident west of the Cascades.

Authorities.—*Scops asio*, Linn. **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 52. (T). C&S. Rh. Kb. Ra. Kk. B. E.

Specimens.—U. of W. Prov. B. E.

TO ONE whose early studies have been conducted in the forests and deciduous groves of the East it is a disappointment to learn that the birds of Washington will not respond to the Screech Owl cry. Why, go out in any grove from Iowa to Massachusetts, at any time of year, at any hour of daylight, save the siesta interval from 10 a. m. to 2 p. m., secrete yourself in a thicket and simulate the mournful, rolling call of the little Screech Owl, and you will at once be conscious of an apprehensive hush in the neighboring trees and bushes. Then follows a murmur of inquiry; Chickadees, Titmice, Nuthatches, Warblers, Vireos, and Jays set out to discover the whereabouts of this arch-enemy who has been indiscreet enough to proclaim his presence during the hours of his helplessness. If a veritable Owl is found, as not infrequently happens, every bird's bill is against him, and there is none so poor to do him reverence—by daylight. This is not alone because he appears stupid and sleepy, or because he regards his tormentors with the fixed gravity of a round-eyed gaze, varied only by "that forlorn, almost despairing wink" peculiar to it, but because they have an ancient and well-grounded grudge against this bird of silent wing and cruel claw. All but the Blue Jay (*Cyanocitta cristata*)—he is a villain himself, and he leads the persecution of Owls from a sheer love of mischief. Whenever a Blue Jay's voice is lifted high, and there is an undercurrent of bird-babble beneath it, it is time for the bird-man to slip rapidly forward from tree to tree and investigate.

But there is none of that here. You whistle until you are dry, and the Chickadees, if they regard the matter at all, infer that you are from Steila-

coom, and give the locality a wide berth. All of which goes to show, either that the Screech Owls of Puget Sound are not very tuneful birds, or that they are so lost in the boundless woodiness as not to be regarded seriously by their fellow bipeds as an economic factor.

Kennicott's Screech Owl is still the commonest Owl on Puget Sound, and its nest may be sought with some degree of confidence. Altho not shunning the deep woods, it seems to find clearing a boon, and is not averse to a certain degree of human propinquity. Mr. Bowles finds it especially abundant in the oak groves and in the woods bordering the Nisqually Flats. They are also characteristic birds of the larger San Juan Islands.

About the middle of April some natural cavity in a tree-trunk, or a deserted nest of one of the larger Woodpeckers is selected for a home. No lining material is required, and the four rounded, white eggs are laid upon the rotten wood or chippings left by the last occupant. The female is a very close sitter, requiring to be lifted from the eggs as incubation progresses; while the male, when not actually sharing the nesting cavity with his mate, is usually to be found in some nearby cranny.

Incubation lasts about three weeks, and the young are blind when hatched. They are voracious eaters, and so importunate in their demands that the hardworking parents are required to lay up a surplusage of food during the night, which they dole out at intervals thru the day.

The food of the Screech Owl consists of mice, beetles, frogs, and even, occasionally, small fish. Birds are also taken, but infrequently, and the



Taken in Oregon.

Photo by A. W. Anthony.

CAUGHT RED-HANDED.

THE BIRD IS A MACFARLANE SCREECH OWL PHOTOGRAPHED IN
THE BLUE MOUNTAINS OF OREGON.

Kennicott Owl, on account of the prevailing mildness of the winter weather, is less often driven to a bird diet than is the eastern cousin.

The Owls remain in a family group for some weeks after the young are able to leave the nest; and one occasionally comes across them standing as motionless as statues on some horizontal limb at a low level in the woods.

When the young are beginning to make inquiries for themselves, or when family cares are quite done, the old birds, who have previously maintained a discreet silence, become tuneful—or noisy, according to the receptivity of the subject. They remain mated until late in the fall, and probably use the calls to keep in touch with each other during the progress of the hunt. The chief call is a tremulous quaver, exquisitely mournful and sweet to those ears which feel the lure of the wild. It is not a difficult matter to



Taken in Oregon

Photo by A. W. Anthony.

YOUNG SCREECH OWLS.

OTUS ASIO MACFARLANEI FROM EASTERN OREGON.

imitate this quavering song, especially if one has mastered the use of his palate; and, altho it is of no interest to the incurious Chickadee, one may call up the proper owner for inspection, if he is within ear-shot.

On the Nisqually Flats, in October, if one has determined to be the

first man at a given "blind," he may hear at the same time from the adjacent woods the somber hooting of the Dusky Horned Owl, gruff and dreadful, the mellow wailing of the Kennicott Screech Owl, and the ghoulish tittering of the California Pygmy Owl. If to this be added the quacking of restless ducks, the bellowing of startled herons, and the screaming of prowling minks, one almost regrets the coming day with its prosy restrictions and unmysterious commonplaces.

No. 190.

MACFARLANE'S SCREECH OWL.

A. O. U. No. 373 h. *Otus asio macfarlanei* (Brewster).

Description.—Similar to *O. a. kennicottii*, but lighter; upperparts sooty gray or buffy brown with more sharply defined black shaft-streaks, and with markings of wings lighter ochraceous buff or cream; underparts still more sharply streaked and elaborately cross-barred with black—gray phase much more common. Measurements somewhat less than those of *kennicottii*.

Recognition Marks.—As in preceding, lighter.

Nesting.—Much as in *O. a. kennicottii*. *Eggs*: 4-6, Av. size 1.48 x 1.26 (37.5 x 32). *Season*: March 20-April 30; one brood.

General Range.—East of the Cascades in Washington, interior southern British Columbia, southward to central Oregon and eastward into Montana (A. O. U.).

Range in Washington.—Not common resident east of the Cascades, more common in southeastern portion of State.

Authorities.—*Scops asio kennicotti*, **Brewster**, Bull. Nutt. Orn. Club, VII, 1882, 227. D², Ss², J.

Specimens.—P¹.

We are chiefly indebted to Captain Charles Bendire for our knowledge of this species in Washington. I have met with it casually at Ahtanum (in Yakima County) and Wallula only, and there are no other published records of its occurrence.

While stationed at Fort Walla Walla in 1881 and 1882, Bendire took five nests of this species. He found that they were unable to use old Woodpecker nests because none were large enough to accommodate them. The mating season began early in March, and thruout that month their "doleful notes" could be heard every evening soon after sundown;



Taken in Oregon.

Photo by A. W. Anthony.

MACFARLANE'S SCREECH OWL.

but after incubation commenced the birds became silent. The eggs were noted as being chiefly oval in shape, but in capacity nearly equal to those of the Long-eared Owl.

"All the nests found near Walla Walla, Washington, were placed in natural cavities in cottonwood trees, from fifteen to twenty feet from the ground, and invariably near water. In two of the holes occupied by them I found trout from six to eight inches long and a small whitefish (*Coregonus williamsonii*) about ten inches long. It still puzzles me to know how they manage to catch

such active fish but believe that where obtainable, these as well as frogs form no inconsiderable portion of their daily fare, while the smaller rodents and grasshoppers form the remainder. I do not believe it catches birds to any extent, and must be considered an eminently useful species."^a

a. Bendire, Life Histories of N. A. Birds, Vol. I., p. 372.

No. 191.

DWARF SCREECH OWL.

A. O. U. No. 374 a. *Otus flammeola idahoensis* (Merriam).

Description.—*Adult*: Plumicorns short; facial disk light tawny or ochraceous; upperparts finely mottled dark brown and ashy-gray with dark shaft-stripes; a whitish or pale tawny bar on scapulars as in *O. a. macfarlanei*; wing-quills with prominent white or buffy spots on outer webs, the inner with paler bars; tail narrowly and irregularly cross-barred with whitish or dull tawny; underparts white, finely and sparingly vermiculated with dusky and with heavy blackish streaks on sides. [Presumably dichromatic, like type form,—parts described above as brown or gray becoming ochraceous or bright rufous in red phase.] *Young birds* are finely barred, dusky or deep gray and lighter, above and below, finely vermiculated with same on forehead and crown. Length: 6.00-6.50 (152.4-165.1); wing 4.90 (124.5).

Recognition Marks.—Sparrow size; finely mottled plumage; feather tufts, or horns, distinctive for size.

Nesting.—Nest and eggs undescribed, presumably like those of *O. flammeola*, viz., nest, in old woodpecker hole; eggs, 3 or 4, white; av. size, 1.15x.95 (29.2x24.1).

General Range.—"Idaho and Eastern Washington."

Range in Washington.—Unknown—probably confined to eastern boundaries.

Authorities.—*M[egascops]. f[lammeola]. idahoensis*, Bailey, Handbook of the Birds of the Western U. S. 1902, p. 185.

ALMOST nothing is known of the life history of the northern form of the Flammulated Screech Owl. The type form, a male, was taken at Ketchum, Alturus County, Idaho, September 22, 1890; and there are records for Eastern Washington in possession of the Biological Survey.

Several years ago Mr. F. S. Merrill captured a small Owl near Spokane, and obtained its photograph, submitted herewith, in the belief that it is of this race. The bird's wing changed position during exposure, so that it appears to have more feathers than it is entitled to.



Taken near Spokane. Photo by F. S. Merrill.
SUPPOSED DWARF SCREECH OWL.

No. 192.

WESTERN HORNED OWL.

A. O. U. No. 375, part. **Bubo virginianus lagophonus** (Oberh.).**Synonyms.**—HOOT OWL (par excellence). CAT OWL. VIRGINIA OWL.

Description.—*Adult*: Ear-tufts conspicuous, two inches or more in length, black, bordered with ochraceous; entire upperparts dusky or blackish, finely mottled with prevailing whitish and ochraceous, the latter color predominant on each feather basally; wing-quills and tail faintly broad-barred; facial disk ochraceous, sharply bordered by blackish laterally; feathers whitish with black tips centrally; a broad white space on chest; feathers of remaining underparts tawny at base, changing to white on terminal portions, finely and heavily barred with dusky-brown; the sides of the breast spotted with the same color; iris bright yellow; bill and toe-nails bluish black. *Young*: Above and below ochraceous barred with dusky. Length 18.00-25.00 (457.2-635); av. of eight specimens: wing 15.06 (382.5); tail 9.60 (243.8); bill including cere 1.66 (42.2). Female averages two or three inches longer than males.

Recognition Marks.—Largest, except for the two rarer species *Scotiaptyx nebulosa* and *Nyctea nyctea*. "Horns" and size distinctive; darker than *subarcticus*; lighter than *saturatus*.

Nesting.—*Nest*: in a hollow tree, or in a deserted Hawk's or Crow's nest. *Eggs*: 2-3, rarely 4, white, subspherical. Av. size, 2.20 x 1.82 (55.9 x 46.2). *Season*: February 20-April 1; one brood.

General Range.—Washington and northern Oregon (excepting the coast region), with Idaho; north through eastern and central British Columbia to Cook Inlet and the interior of Alaska (Oberholser).

Range in Washington.—Eastern Washington, not uncommon resident in timbered sections; perhaps intergrading with *B. v. saturatus* on eastern slopes of Cascades.

Authorities.—? *Bubo virginianus saturatus* Ridgw., Brewster, Bull. Nutt. Orn. Club VII., Oct. 1882, pp. 227, 229, 230 (part). ? Ibid. Dawson, Auk, Vol. XIV., Apr. 1897, p. 174. *B. v. pallescens*, Snodgrass, Auk, XX., 1903, 205; XXI., 1904, 228. Oberholser, Proc. Nat. Mus. Vol. XXVII., 1904, No. 1352, pp. 185, 186. D¹, D², Ss¹, Ss², J. E(?).

Specimens.—P¹, Prov. E.

BUBO HORRIBILIS should have been the name of this feathered demon of the woods, this grizzly of the midnight air. He loves the darkness because his deeds are evil; and after the protecting sun has set, woe betide the mole or rabbit, Bobwhite, Jay, or Chanticleer, who dares to stir where this monster is awing. When captured in a steel trap, as he often is by aggrieved poultry fanciers, the ruffling of the feathers, the alternate hissing and fierce snapping of the mandibles, and the greenish yellow light which comes flashing from the great saucer eyes, all give fair warning of what one may expect from the free-foot once it gets a chance to close upon a victim.

Many attempts have been made to subdue the naturally ferocious disposition of this bird; but even when raised from the nest it is found to be sullen and treacherous, insomuch that it will, without apparent provocation, fly at its keeper like an infuriated tiger. Fresh meat is fed it in confinement, and anything of fish, flesh, or fowl is welcomed.

The food of the Horned Owl in Eastern Washington consists of rabbits, and all the various rodents which infest meadows and sage, together with birds of many sorts, especially grouse. They easily cultivate an acquaintance with the poultry-yard, and if well fed, become so fastidious that they will have nothing but the brains of a fowl. Naturally, this epicurean taste is resented by intelligent ranchers, and the day of the Horned Owl is slowly waning.

Nevertheless, the attachment which this bird forms for a given locality is very pronounced. Persecution will make it excessively wary and drive it to maintain almost unbroken silence, but nothing short of a fatal shot will induce it to forsake its chosen haunts.

Where danger has not taught discretion they are quite free with their nocturnal concerts; but they are known to nest in places where a single full-voiced *hoot* would draw the fire of the countryside. The mating song (save the mark!) is a succession of resonant bellowings in a single key,—*H' hoo, whoo, hoo-hoo, who*—quite variable as to length and form. Besides this the bird occasionally indulges in a sepulchral laughter, *hoo hoo hoo hoo hoo hoo hoo*, which arouses anything but mirthful feelings in the listener.

Nesting begins earlier than in the case of any other resident species, and fresh eggs may be looked for by the third week in February, whatever the state of the weather. Hollows in trees are sometimes used, and if so, receive no lining; but old nests of hawk, magpie, or crow are more commonly employed. From two to four subspherical white eggs are laid—about the size of hens' eggs—and they require the services of the mother bird for about four weeks. During this time the male is in close attendance, feeding his mate upon the nest and keeping a sharp lookout for intruders.

When disturbed the owners pose in various attitudes, grotesque and frightful, snapping their mandibles and now and then groaning in a most dismal way. If the young are well grown it is not always safe to venture near, for a raking shot from those powerful talons will leave a very sore head.

Once, in Yakima County, March 9th, 1887, it was, I took a set of two eggs well incubated, of the Western Horned Owl, from an old nest of Swainson's Hawk, forty feet high in a giant balm tree. A few weeks later I came upon a set of four, laid by the same bird, in an old Crow's nest in a neighboring poplar grove; and again, a month later, a set of two in another Crow's nest not a hundred feet away. These last I spared, for one does not always contest the rights of motherhood, even in tigers.

No. 193.

ARCTIC HORNED OWL.

A. O. U. No. 375 a. *Bubo virginianus subarcticus* (Hoy).**Synonym.**—WHITE HORNED OWL.

Description.—*Adult*: Coloration very light, ochraceous tints absent; general color white mottled and barred with blackish, heavily above, more lightly, or scarcely, below. In extreme examples similar to Snowy Owl, *Nyctea nyctea*, from which it is easily distinguished by "horns" and by different proportions.

General Range.—Arctic America, south irregularly in winter in western United States, Nebraska, Montana, Washington, etc.

Range in Washington.—Casual in winter—all records happen to be from West-side, but bird should occur east as well.

Authorities.—*Bubo virginianus (arcticus)* Cooper and Suckley, Rep. Pac. R. R. Surv. XII., pt. II., 1860, p. 154. *B. v. saturatus* Brewster, Bull. Nutt. Orn. Club VII., Oct. 1882, pp. 227, 229, 230 (part).

Specimens.—U. of W. Prov. B. C.

THRUOUT most of their United States range the Horned Owls are non-migratory; but as we go north there is more or less seasonal shifting, while the northernmost member of the group, *B. v. subarcticus*, if not exactly migratory, is at least nomadic in winter. The behests of an Arctic winter are not to be gainsaid, and this species is occasionally forced to fall back upon our borders,—not so frequently, however, nor so numerously as the Snowy Owl (*Nyctea nyctea*), which it has come more or less to resemble both in economy and appearance.

No. 194.

DUSKY HORNED OWL.

A. O. U. No. 375 c. *Bubo virginianus saturatus* Ridgw.**Synonym.**—PACIFIC HORNED OWL (formerly so called).

Description.—*Adult*: Similar to *B. v. lagophonus*, but darker, chiefly black and grayish, tawny markings duller, much reduced in area; facial disk ashy gray; feet much darker and more heavily mottled. Very variable in dimensions. Specimens perfectly typical of alleged *B. v. pacificus* (the smaller type) appear on Puget Sound. Average of four males: wing 13.71 (348.3); tail 8.36 (212.3); bill 1.57 (39.8). Average of six females: wing 14.75 (374.7); tail 8.95 (227.2); bill 1.58 (40) (Oberholser).

Recognition Marks.—As in *B. v. lagophonus*; darker.

Nesting.—Not different.

General Range.—Northwest coast slope from Oregon north to Sitka, intergrading irregularly with interior forms, and theoretically overflowing on eastern slopes of Cascades.

Range in Washington.—Not common resident on Puget Sound, irregularly to or thru the Cascade Mountains.

Authorities.—? *Bubo virginianus* var? Newberry, Rep. Pac. R. R. Surv. VI., pt. IV., 1857, p. 76. *Bubo virginianus pacificus*, Cassin, **Baird**, Rep. Pac. R. R. Surv. IX., 1858, p. 51. (T). C&S. L. Ra. Kk. B. E.

Specimens.—U. of W. Prov. B. BN. E.

HORNED OWLS in a state of nature do not pose for inspection unless forcibly detained. A steel trap is, of course, the surest method of detention, but a mob of Steller Jays ranks a close second. Nothing can exceed the joy of the Jay upon the discovery of one of these grim death's heads secreted in the depths of a fir tree. Here is a day's sport cut out for one whose "sportin' blood" runs high on week-days and turns feverish on owl days. The whole Jay countryside is aroused. To the number of a score they gather about the victim and throw all his sins up to him in a chorus of Billingsgate. The Owl beams hate at them, snaps his mandibles fiercely, and makes now and then an ineffectual dab at his pursuers, which only seems to arouse fresh shrieks of laughter. When the din becomes unbearable, he may dash from cover, but the Jays surround him at the next resting place, screaming sarcastic apologies for their past rudeness, and promising redoubled misbehavior.

One wonders that they dare do it, for the sullen object of mirth will assuredly wreak vengeance on them when his turn comes in the first watch of the night. It is difficult to exaggerate the rapacity of these freebooters. An observer in New York State, speaking, of course, of the eastern form, "states that in a nest he examined, containing two young Owls, he found the following animals: 'a mouse, a young muskrat, two eels, four bullheads, a Woodcock, four Ruffed Grouse, one rabbit and eleven rats. The food taken out of the nest weighed almost 18 pounds. A curious fact connected with these captives was that the heads were eaten off, the bodies being untouched.'"^a Mr. Bowles finds that during the fall and winter months on the Nisqually Flats, these birds make a thoro search every night for wounded ducks. So successful are they that out of hundreds that are wounded and lost by sportsmen, it is very unusual to find one, while well-picked carcasses are common.

Quite in keeping with the Horned Owl's sinister aspect are his vocal performances at night. As a young man in Tacoma, the writer once lived on East 26th Street, immediately adjoining a large wooden church building.

a. Bendire, Life Histories N. A. Birds, Vol. I., p. 382.

The chamber window looked upon a flat kitchen roof thru which projected a brick chimney some ten feet away. At three o'clock one morning a horrible nightmare gave way to a still more horrible waking. Murder most foul was being committed on the roof just outside the open window, and the shrieks of the victims (at least seven of them!) were drowned by the imprecations of the attacking party,—fire-eating pirates to the number of a dozen. Pandemonium reigned and my bones were liquid with fright—when suddenly the tumult ceased; nor could I imagine thru a whole sick day what had been the occasion of the terrifying visitation. But two weeks later the conflict was renewed, at a merciful distance this time. Peering out into the moonlight I beheld one of these Owls perched upon the chimney of the church hard by, gibbering and shrieking like one possessed. Cat-calls, groans, and demoniacal laughter were varied by wails and screeches, as of souls in torment—an occasion most memorable. The previous serenade had evidently been rendered from the kitchen chimney, and I pray never to hear its equal.

The distribution of the Dusky Horned Owl is still a matter of considerable uncertainty. It is reported not only from the wooded heights of mountain ranges, lying far to southward, but from Labrador as well. Whether it is really a single stock which has become so scattered, or whether it is only that like conditions have affected diverse stocks in a similar fashion, one cannot tell. I have set down those resident birds found upon the east slopes of the Cascades as of this form, but a pair found nesting in the wooded hills of Stevens County were undoubtedly of the lighter form. Horned Owls retire in winter to some extent to lower levels and latitudes. Bendire at Walla Walla found the Dusky Owl to be more common at that season than the breeding form, *B. v. lagophonus*.

No. 195.

SNOWY OWL.

A. O. U. No. 376. *Nyctea nyctea* (Linn.).

Description.—*Adult male*: Without plumicorns; entire plumage pure white, sometimes almost unmarked, but usually more or less spotted or indistinctly barred above with pale brownish or fuscous,—perhaps heaviest on middle of back and wing-coverts; wing-quills and tail feathers irregularly and sparingly spotted with dusky; below still fainter indications of dusky barrings; legs and feet immaculate, heavily feathered; bill and claws black; iris yellow. *Adult female*: Similar to male, but much more heavily barred with brownish black,—only face, fore-breast and feet unmarked; top of head and hindneck spotted with dusky. Length 20.00-27.00 (508-685.8); wing 15.50-18.75 (393.7-476.3); tail 9.00-10.50 (228.6-266.7); bill 1.10-1.40 (27.9-35.6).

Recognition Marks.—Large size (Brant size); snowy white with dusky bars; no ear-tufts.

Nesting.—Does not breed in Washington. *Nest:* on the ground. *Eggs:* 3-10, white. Av. size, 2.24×1.77 (56.9×45).

General Range.—Northern portions of the Northern Hemisphere. In North America breeding wholly north of the United States; in winter migrating south to the Middle States, straggling to South Carolina, Texas, California, and Bermuda.

Range in Washington.—Not uncommon winter visitant, sporadically abundant.

Authorities.—*Nyctea nivca*, Allen, B. N. O. C. VI. (1881), p. 128. T(?). L. Ra. B. E.

Specimens.—(U. of W.) P¹. Prov. E.

STRAGGLERS of this species are occasionally reported from any of the northern States in winter, but it is only upon the occasion of widely concerted movement that general attention is drawn to their presence. Such an extended flight occurred in the East in the winter of 1901-2, when information of the capture of more than four hundred specimens was compiled by Mr. Ruthven Deane. The last noticeable movement^a in the Pacific Northwest occurred in 1896-7, being noted by Dr. Merrill at Ft. Sherman, Idaho; Rathbun at Seattle; Bowles at Tacoma; and others. They were especially noticeable upon the Tacoma tide-flats, since these reproduced on a miniature scale the tundra of their native haunts. They were, however, very wary and difficult of approach, in spite of the glare of bright sunshine on the snow.

No opportunity is ever lost of killing one of these handsome midwinter visitors; and one might suppose, from the number of specimens which adorn store windows and taxidermists' shops, that the bird is much more common than it really is.

"The home of the Snowy Owl is on the immense moss- and lichen-covered tundras of the boreal regions, where it leads an easy existence and finds an abundant supply of food during the short Arctic summers. It hunts its prey at all hours and subsists principally upon the lemming, and it is said to be always abundant wherever these mammals are found in any numbers. Small rodents are also caught, as well as Ptarmigan, Ducks, and other water fowl, and even the Arctic hare, an animal fully as heavy again as these Owls, is said to be successfully attacked and killed by them" (Bendire).

a. Again abundant thruout State in winter of 1908-9; number killed near Walla Walla in Dec. 1908.

No. 196.

AMERICAN HAWK OWL.

A. O. U. No. 377 a. *Surnia ulula caparoch* (Müll.).**Synonym.**—DAY OWL.

Description.—*Adult*: Without ear-tufts; above dark grayish brown or fuscous, finely and heavily spotted with white on head and upper back; with larger quadrate spots or bars of the same on middle back and wings; upper tail-coverts distinctly, and tail indistinctly or brokenly, barred with white; tail rounded, the outer pair of feathers about an inch shorter than the central pair; a crescentic patch behind the ear-coverts, another on the side of the neck behind, and one on the upper throat, pure dark brown; facial disk—so far as indicated—and chest, white; breast irregularly barred or streaked with fuscous on white ground, sometimes almost solid fuscous; remaining underparts closely and evenly barred with reddish brown and white in about equal proportions; legs, fully feathered to the claws, tawny, spotted, or lightly barred with light reddish brown; bill yellow. Length 14.50-17.50 (368.3-444.5); wing 9.00 (228.6); tail 7.00 (177.8); bill .85 (21.6).

Recognition Marks.—Crow size; small head, slender build; strictly diurnal habits; general hawk-like appearance.

Nesting.—Not known to breed in Washington. *Nest*: of sticks, mosses, and feathers, in coniferous trees, or in holes of decayed trees, or even on a rock or stump. *Eggs*: 3-7, white. Av. size, 1.53 x 1.24 (38.9 x 31.5). *Season*: April; one brood.

General Range.—Arctic America, breeding from Newfoundland northward, and migrating in winter to the northern borders of the United States. Occasional in England. May possibly breed in certain northern states.

Range in Washington.—Very rare or casual in winter. Probably also resident in summer (Edson, Johnson).

Authorities.—Johnson, Condor, Vol. VIII, Jan. 1906, p. 26. E.

Specimens.—(U. of W.) Prov. B. BN.

THIS rare and singular winter visitor looks and acts like a hawk, and it is strictly diurnal in its habits; but it has, beside the facial disk, the noiseless plumage which marks the Owls. When seen southerly it is most frequently at look-out upon the top of a stub, but Mr. Bowles says of a pair (one of which he secured), near Martin in the Cascade Range: "On the wing they might easily be taken for one of the Buteos, as the flight consists of a series of slow wing-beats and a vast deal of circling on motionless wings."

Its proper home is north, altho there is just a suspicion that it may be found breeding in our own mountains. Mr. L. M. Turner says of it^a: "The American Hawk Owl is a very common resident thruout the Yukon district. Along the Coast it is quite abundant. They usually seclude themselves in

a. Contributions to the Natural History of Alaska, p. 165.

the alder or willow patches, or are frequently startled from some grass-covered bank of a lake. They fly equally well by night or by day. I once observed a bird of this species sitting, during a bright day, on a post. It squatted, then stood up and seemed ready to fly at any moment. I went within six feet of it, and it then settled down as if to take a nap. I retired and threw a stick at it to make it fly. I shouted and made other noises, and only after several attempts to dislodge it did it fly. When taking flight from an elevated position they invariably drop to within a few feet of the earth and sail away rapidly. They are not at all vicious; they hold tightly with their claws, and in no instance did a wounded Hawk Owl attempt to use its beak, tho the feathers on the head and neck were raised and an attitude of threatened attack with beak was always made. After a few minutes captivity they become passive and make no attempt to escape."

No. 197.

BURROWING OWL.

A. O. U. No. 378. *Speotyto cunicularia hypogæa* (Bonap.).

Synonyms.—GROUND OWL. BILLY OWL. CUCKOO OWL. SNAKE OWL.

Description.—*Adults:* Above dull grayish brown heavily spotted and commingled with white or pale ochraceous-buff; the spots paired on the larger feathers and defined by adjacent dusky areas; the paired spots enlarged and dissociated toward base of remiges and rectrices; tail thus irregularly six or seven barred; extreme forehead, ill-defined superciliary stripe, and throat, broadly, white; jugulum crossed by mottled band of brown and white beneath which a pectoral semilune of white; remaining underparts white or pale ochraceous-buff, heavily barred, save on lower belly and crissum, with brown and brownish dusky; lining of wings chiefly pale ochraceous. The plumage is very variable both in the shade of brown and in the amount of white admixed, some specimens appearing nearly white on the head and upper back. *Young birds* are less spotted above, on head and back nearly uniform grayish brown, and are unmarked below save on jugular band. Length about 9.50 (241.3); wing 6.75 (171.5); tail 3.20 (81.3); bill from cere .55 (14); tarsus 1.65 (41.9).

Recognition Marks.—Robin size but appearing much larger; terrestrial habits; head without plumicorns; *light* grayish brown coloration.

Nesting.—*Nest:* at end of underground burrow, 4 to 10 feet in length, usually a mere cushion of dried horse-dung, occasionally with admixture of feathers and other soft substances. *Eggs:* 5-11, white, subspherical, highly glossed. Av. size, 1.25 x 1.00 (31.8 x 25.4). *Season:* April 20-May 20; one brood.

General Range.—Western United States and adjoining British Provinces,

from central portions of the Great Plains west to the Pacific; south to Guatemala. Accidental in New York and Massachusetts.

Range in Washington.—East-side, common summer resident and migrant, breeding in Upper Sonoran and Transition life-zones; casual west of the Cascades.

Migrations.—*Spring*: Ahtanum, March 13, 1900; Brewster, April 6, 1896. *Fall*: Tacoma, September 23, 1899.

Authorities.—[*Athene cunicularia*, Bonap. C&S., XII. pt. II. p. 157, 158. "Fort Dalles." Not Valid.] ["Burrowing Owl," Johnson, Rep. Gov. W. T. 1884 (1885), 22.] **Bendire**, Life Hist. N. A. Birds, I. 1892, p. 395. T. C&S. D¹. Sr. D². Ss¹. Ss². J. B. E.

Specimens.—(U. of W.) P. Prov. C. BN.

A DAY on the cattle range in eastern Washington is almost certain to be varied by the sight of a "Ground Owl," which first chatters valorously from the mouth of its burrow, and then either dives below or flees to some distant sage top. Or, if it holds its own at the home mound, it bows and clucks in a fashion which is eccentric rather than polite. Of its absurd appearance Coes



Taken in Douglas County.

Photo by the Author.

ON GUARD.

they gaze about with a bland and self-satisfied, but earnest air, as if about to address an audience upon a subject of great pith and moment. They suddenly bow low with profound gravity, and rising as abruptly, they begin to twitch

says^a: "Their figure is peculiar with their long legs and short tail; the element of the grotesque is never wanting; it is hard to say whether they look most ludicrous as they stand stiffly erect and motionless, or when they suddenly turn tail to duck into a hole, or when engaged in their various antics. Bolt upright on what may be imagined their rostrum,

a. Birds of the Northwest, 1874, pp. 326-7.

their face and roll their eyes about in the most mysterious manner, gesticulating wildly, every now and then bending forward till the breast almost touches the ground, to propound the argument with more telling effect. Then they face about to address the rear, that all alike may feel the force of their logic; they draw themselves up to their fullest height, outwardly calm and self-contained, pausing in the discourse to note its effect upon the audience, and collect their wits for the next rhetorical flourish. And no distant likeness between these frothy orators and others is found in the celerity with which they subside and seek their holes on the slightest intimation of danger."

These curious Owls are alone among land birds in their choice of subterranean dwellings. On the Great Plains they avail themselves largely of deserted prairie dog holes, but in Washington their choice lies between "ground squirrel" and badger holes, if in the open sage; but it is limited to gopher holes if in the close-cropped

pasture land, which is an equal favorite. It is probable that the Burrowing Owl does not originate burrows, altho in the case of the smaller rodents the tunnels require to be enlarged. This the bird does, not with its beak, but with the powerful claws, loosening the dirt and kicking it backward by successive stages until it is ejected at the entrance. A typical burrow may descend sharply three or four feet, then bend and rise slightly until an ample nesting chamber, a foot or more in width and six inches deep, is reached.

The nesting cavity is lined heavily with dried horse-dung, torn to feathery shreds and spread evenly. The tunnel has more or less of the same material scattered thruout its length, and a certain amount distributed over the external mound is a necessary evidence of occupation. One need not kill these Owls to learn what they feed on, for half-eaten mice, dismembered frogs, and



*Taken in Walla
Walla County.*

Photo by the Author.

NO EASY TASK.

EGGS OF BURROWING OWL EXPOSED AT END OF TUNNEL NINE FEET IN LENGTH.

headless snakes litter the floor, and invite the offices of the far-venturing blow-fly. Fleas usually abound; and altogether the nuptial chamber of this doughty troglodyte is not an inviting place.

From six to eleven young are raised in a single brood; and when we consider that the adults themselves require more than their own weight of animal food daily, we begin to form some conception of the economic importance of these birds. Their food includes all the baneful rout of rodents,



Taken in Walla Walla County.

Photo by the Author.

THE END OF THE BURROW.
THE EGGS ARE THOSE OF PRECEDING ILLUSTRATION.

and they are able to kill "ground squirrels" of a size equal to their own. Besides these, lizards, frogs, snakes, and even small fish, are captured. Grasshoppers and crickets, as well as beetles of many sorts, are staple food, and for these the bird hunts by day as well as by night. In the pursuit of prey, however, the birds become much more active at sunset, when they may be seen flitting about on noiseless wing, or

else hovering in mid air above a suspected spot, after the well known fashion of the Sparrow Hawk. Small game is snatched from the ground without lighting, but in capturing a ground squirrel, the bird first plants his talons in the back, then breaks the creature's neck by sharp quick blows of the beak. Soberly regarding the special situation of the East-side rancher, I should say that the Burrowing Owl is his best ally among birds, and that he who wantonly destroys one should be classed with the man who tramples a field of grain or sets fire to a haystack.

Whenever food is plenty and the ground inviting, Burrowing Owls are likely to form little colonies, ten or a dozen pairs being found in a stretch of two or three acres. They appear to be peaceably disposed toward each other, and mates are notably faithful. Soon after the return in spring, which occurs during the first week in March for the southern part of the State, and

the first week in April for the northern, one may hear at evening a soft and mellow love song, *coo co-o*, which the male repeats by the hour. One who has heard this tender note welling up from the back pasture, while the locust trees by the gate are distilling their sweetest fragrance, and Adams is fading on the western horizon in the last afterglow of sunset, can easily forgive many things about the Burrowing Owl which are less pleasant.



Taken in Oregon.

Photo by Finley and Bohlman.

BROTHERS.

No. 198.

PYGMY OWL.

A. O. U. No. 379. *Glaucidium gnoma* Wagler.

Synonym.—GNOME OWL.

Description.—*Adults:* Upperparts warm brown (snuff brown or darker), finely spotted with white or pale ochraceous-buff—the spots are smallest and circular on head and upper back, larger, cordate or hastate on tertials and wing-coverts, and everywhere bordered obscurely with dusky; flight-feathers spotted with white; tail crossed by six interrupted bars (one terminal) of white; a cervical collar of mingled black and white; sides and a band across jugulum color of back or a little lighter, and similarly spotted; throat white; underparts white streaked coarsely with sepia, the streaks tending to coalesce in stripes. Bill and cere greenish yellow; feet dull yellow with soles of bright chrome, claws black; iris bright yellow. The female is of a rather lighter shade of brown above with

fewer and larger spots of white, and the cervical collar is more or less obscured. Length as next.

Recognition Marks.—Sparrow size; chunky appearance; carries tail at angle; unmistakable; lighter than preceding.

Nesting.—*Nest*: in cavity of tree or stump, or usually, in old woodpecker holes. *Eggs*: 3 or 4, white, lusterless and surface minutely pitted. Av. size 1.10 x .90 (27.9 x 22.9). *Season*: second week in May to first week in June; one brood.

General Range.—Western North America (except Pacific Coast district) from British Columbia south to tablelands of Mexico, breeding chiefly in mountainous and timbered portions.

Range in Washington.—Not common resident east of Cascade Mountains.

Authorities.—Bendire, Auk, Vol. V., Oct. 1888, p. 397. (T). D².

Specimens.—1st. Prov.

CAPTAIN BENDIRE met with this species on several occasions in the Blue Mountains, and thinks that it is normally confined to pine timber. This may be true of the breeding season, but it is probable that it visits the thickets of the lower valleys in winter. The only specimen I ever came upon was taken in the winter of 1886-7 in a cat-tail swamp in the Altanum Valley (Yakima County) some ten miles from the mountain timber. Its habits are quite similar to those of the following form, which is better known.

No. 199.

CALIFORNIA PYGMY OWL.

A. O. U. No. 379 a. **Glaucidium gnoma californicum** (Selater).

Synonym.—CALIFORNIA GNOME OWL.

Description.—*Adults*: Like *G. gnoma* but darker, dark reddish brown above; spotting more strongly ochraceous; markings of underparts clove-brown to black. Length: male 7.00 (177.8), female 7.50 (190.5); wing 3.85 (97.8); tail 2.65 (67.3); bill from cere .43 (10.9).

Recognition Marks.—As in foregoing; darker.

Nesting.—As in preceding.

General Range.—Pacific Coast district from northern California north to southern British Columbia.

Range in Washington.—Not uncommon resident west of the Cascades.

Authorities.—*Glaucidium gnoma*, Wagler, Baird, Rep. Pac. R. R. Surv. IX., p. 62. C&S. L. Rh. Ra. B. E.

Specimens.—U. of W. Prov. B. E.

DISCOVERY of an owl west of the Cascade Mountains comes in the nature of a revelation. Save in the matter of a thoro inspection of the "holey oaks" of Pierce County, no ornithologist need claim the slightest credit for what he knows of the owls of Puget Sound; all that he has was given to him.

Now it has been given to some to see Pygmy Owls, but what vaunting creature would undertake to bring one in "dead or alive" on a hundred dollar wager?

Like the wind, his royal owlets flit-teth where he listeth, and you cannot tell whence he comes nor whether he will come again this twelvemonth.

When my moment of privilege came, this pocket edition of the powers that prey stood out boldly and unequivocally upon the topmost splinter of a way-side stub in Whatcom County, and challenged attention. The gnome gave his back to the road, and now and then teetered his tail, which was



CALIFORNIA PYGMY OWL.

otherwise set at a jaunty angle, nervously, as tho there were something on his mind. But this preoccupation did not deter the Owl from bending an occasional sharp glance of scrutiny upon the bird-man. Then all at once the bird whirled backward and launched himself, like a bolt from a crossbow, at a mouse some sixty feet away across the road. Seizing the "wee, timorous, cowerin' beastie" at the very entrance of his hole, the bird maintained its grasp upon it with both feet, and supported itself against the rodent's struggles by wings outstretched upon the ground. Not until

the squeakings of the victim had quite ceased, did the captor rise and disappear by rapid flight into the wood.

The flight of the Pygmy Owl is not muffled by softened wing-linings, as is the case with the Short-eared and others which hunt much a-wing; it is rather pert and noisy, like a Shrike's. Like a Shrike, also, in extended course it dives with closed wings, then opens suddenly and flutters up with rapid strokes to regain the former level,—describing thus successive loops of flight.

In spite of his insignificant size, the Pygmy is a dashing little brigand, and no bird up to the size of a Robin is safe from its clutches. So bold is he that upon one occasion, when Mr. Bowles threw a large stick at one, the Owl charged at the passing missile with all imaginable fury. The diet descends not infrequently to insects, but squirrels of twice the Owl's weight are promptly seized when occasion offers. Dark days are as good as night to them, and they are sometimes abroad on bright days as well.

The Pygmy Owl "sings" in a small hollow voice, *klook - klook - klook look look look look look look*, with an effect for tempo something like that produced by the accelerating rebound of a tiny wooden mallet, struck on resonant wood, in quality something between this and the pectoral quaver of the Screech Owl. To our great coarse ears it is, of course, ridiculously inoffensive, but how like the knell of doom it must sound to a trembling Chickadee!

No. 200.

MARSH HAWK.

A. O. U. No. 331. **Circus hudsonius** (Linn.).

Synonyms.—MARSH HARRIER. MOUSE HAWK. SNAKE HAWK.

Description.—*Adult male:* Head and neck all around, chest, and upperparts light bluish gray or ashy, the hind head darker, with much partially concealed white, and tinged with ochraceous; five outer primaries mostly black; upper tail-coverts pure white; tail silvery gray, barred irregularly with blackish, the subterminal band largest, tipped with whitish, the inner webs whitish or rusty-tinged; remaining underparts, including under side of wing (except terminal third of primaries), white,—the belly, flanks and tibiae sparsely spotted or barred with rufous or pale dusky, and the lining of the wing with a few dusky spots and bars; wings, tail, and shanks, greatly lengthened; tip of wing formed by third and fourth primaries, wing when folded falling an inch or more short of tail, and sometimes not reaching to end of feet. Iris bright yellow; bill blackish; feet yellow; claws black. *Adult female:* Of different coloring; upperparts dusky brown, the head and neck streaked and the lesser wing-coverts spotted or margined with cinnamon-rufous; longer upper tail-coverts white, the shorter ones brown, tipped with rufous; tail brown, becoming paler at tip, and crossed by six or

seven distinct, blackish bands; remaining feathers barred with ochraceous and blackish; underparts ochraceous or buffy, streaked broadly on the breast, and narrowly on the belly with light brown or dusky. *Immature*: Similar to adult female but darker,—rich chocolate-brown above, and on sides of neck and cheeks; the underparts darker, cinnamon-rufous,—the belly unmarked. Males show every gradation between immature and adult plumage, and indeed the perfect adult male plumage is rarely found. Adult male, length: 17.50-20.00 (444.5-508); wing 13.00-14.00 (330.2-355.6); tail 8.50-10.00 (215.9-254); bill from nostril .65 (16.5). Adult female, length: 19.00-24.00 (482.6-609.6); wing 14.00-16.00 (355.6-406.4); tail 9.50-10.50 (241.3-266.7).

Recognition Marks.—Crow size; white upper tail-coverts make the best field mark; long tail; marsh-haunting habits.

Nesting.—*Nest*: on the ground in marshes, of twigs and dry grasses or moss. *Eggs*: 3-6, 8 of record, pale bluish white, usually unmarked but sometimes spotted or blotched with pale rufous. Av. size, 1.78 x 1.40 (45.2 x 35.6). *Season*: May 1-June 10; one brood.

General Range.—North America in general, south to Panama and Cuba. Breeds thruout its North American range.

Range in Washington.—Not uncommon summer resident and migrant thruout the State, rather more common easterly; casual in winter.

Authorities.—*Circus hudsonius*, Vieill, **Cooper and Suckley**, Rep. Pac. R. R. Surv. XII. pt. II. 1860, p. 150. T. C&S. Rh. D¹. Ra. D². Ss¹. B. E.

Specimens.—Prov. B. E.

HUMILITY is the leading characteristic of this "ignoble" bird of prey, whether we regard its chosen paths, its spirit, or the nature of its quarry. Pre-eminently a bird of the meadows and marshes, it usually avoids the woods entirely, and is to be seen coursing over the grass and weed tops with an easy gliding flight. Since it flies at such a low elevation as neither to see nor be seen, over the limits of an entire field, it oftenest moves in a huge zigzag course, quartering its territory like a hunting-dog. Now and then the bird pauses and hovers to make a more careful examination of a suspect, or drops suddenly into the grass seizing a mole or cricket, and retiring to a convenient spot—a fence-post or a grassy knoll—to devour its catch.

The food of the Marsh Hawk consists entirely of meadow-mice, gophers, garter-snakes, frogs, lizards, grasshoppers and the like. In hunting for gophers the bird flies higher and secures its prey by a headlong dash, pinning the victim to the ground and making sure of the kill before rising. So great is its fondness for mice that one may, with sufficient cover for concealment, succeed in calling the Hawk very close by imitating the squeak of a mouse in distress. In winter, when other food is scarce, small birds may be attacked. Occasionally the Harrier essays nobler game, as a Teal or a Grouse; but he makes a poor fist at it, and usually retires vowing never again to aspire above his station.

This Hawk is one of the most unwary, as it is the most useful of its race.

It is no achievement to assassinate one from behind the cover of a convenient haycock, or even to arrest its easy flight in an open field. The tillers of the soil have done nothing more foolish or more prejudicial to their own interests than to allow and encourage the slaughter of this innocent and highly useful member of the agrarian police. A farmer would have as just cause to be indignant at some interloper who shoots a Marsh Hawk on his premises, as at another who tramples down his wheat or breaks up his gopher traps. Given adequate protection to the Marsh Hawk, the Swainson, and the Red-tailed Hawks, and the Burrowing Owl, the "squirrel" problem would no longer trouble the Palouse farmer.

As the breeding season approaches, the male Harrier, feeling the impulse of the ennobling passion, mounts aloft and



MARSH HAWK.

performs some astonishing aerial evolutions for the delectation of his mate. He soars about at a great height, screaming like a Falcon; or he suddenly lets go and comes tumbling out of space head over heels, only to pull up at a safe distance from the ground and listen to the admiring shrieks of his spouse. "At other times," says Mr. Ernest E. Thompson, "he flies across the marsh in a course which would outline a gigantic saw, each of the descending parts done in a somersault, and accompanied by the screeching notes, which form the only love song within the range of his limited vocal powers." This operation is not necessary in order to win his mate, for he is supposed to have won

her "for keeps"; but, after all, it is well enough to remind her now and then that he is a very good fellow,—for she is a size larger than he and a little exacting in matters of courtesy.

Not only are the Marsh Hawks wedded for life, but the male is very much devoted to his family. He assists in nest-building, shares the duty of incubation, and is assiduous in providing for his brooding mate. A nesting site is selected about the middle of April, customarily in the tall grass adjoin-



Photo by the Author.

Taken in Douglas County.

NEST AND EGGS OF
THE MARSH HAWK.

ing a swamp, altho latterly alfalfa fields have come to be great favorites. If the ground is wet, sticks are first laid down; but otherwise only grass, dead leaves, and weed-stems, with a little hair and moss or feathers, are used to build up a low platform, broad and slightly hollowed on top. Here four or five eggs, pale blue and commonly unmarked, are laid; but six is not unusual, and two sets of eight are on record, of which one is from this State. In Yakima County I once found a nest on the ground in a little opening of an aspen grove, the birds having probably retired to the woods to avoid the winds prevalent at that season.

Incubation is accomplished in about three weeks, or if it has commenced with the laying of the first egg, as is often the case, then the last egg may not hatch for a week longer. While the female is brooding the young, she is frequently fed by the mate from a considerable height. Dr. Lynds Jones relates one such instance in which an element of sportiveness appeared to enter in: "Once during the breeding season I saw a male catch a large garter snake and fly up with it several hundred feet, then drop it to the female who just then came flying along near the ground. She caught it and carried it to the nest followed by the male."

The young, after leaving the nest, hunt for several months with their parents, and the last and costliest lesson which they learn is fear of man. If these most excellent mousers had half the gratitude shown to them which we manifest toward cats, they might be abundant where they are now rare. Without question the past twenty years has shown a marked decrease in the abundance of this species in Washington. The Marsh Hawk is partially and irregularly migratory, but it is now seldom seen hereabouts in winter, whereas Cooper described it as "abundant thruout the open districts of the Territory especially in winter."

No. 201.

SHARP-SHINNED HAWK.

A. O. U. No. 332. *Accipiter velox* (Wils.).

Synonyms.—"SPARROW" HAWK. BIRD HAWK.

Description.—*Adult*: Above slaty gray, dark plumbeous, or chocolate-brown, with a glaucous cast, darker but not black on head; occipital feathers, scapulars, and inner quills with concealed white at base; primaries banded with two shades of fuscous above, contrasting dusky and whitish below; tail, nearly square, slightly emarginate, crossed by five dusky bands, and narrowly whitish at tip, the basal band concealed and nearly obsolete; auriculars rusty, with black shaft-lines; throat whitish or pale buffy with blackish shafts; remaining underparts white, heavily barred on breast, belly, sides, axillaries, and shanks with pale cinnamon-rufous,—feathers of breast with blackish shaft-lines; lining of wings rusty-tinged, finely and irregularly barred with dusky; crissum unmarked, or merely touched with rufous; iris, cere, and feet yellow; bill and claws blackish. Females are perhaps less blue above, and duller or paler below. *Immature*: Above dusky brown margined with rufous, concealed white cropping out in streaks on forehead and hind-neck, and in spots on scapulars, etc.; below streaked and spotted instead of barred, with pale browns (Vandyke brown, Prout's brown, etc.) and dusky, narrowly on cheeks and throat, more broadly on breast and sides,—markings pandurate on sides of breast, cordate, tear-shaped, or various below, sometimes transverse on flanks and shanks. Between this and the typical adult plumage every gradation exists. Rather variable in size,—adult male,

length: 10.00-12.00 (254-304.8); wing 6.60 (167.6); tail 6.00 (152.4); bill from nostril .40 (10.2). Adult female, length: 12.50-14.25 (317.5-362); wing 8.00 (203.2); tail 7.25 (184.2).

Recognition Marks.—Little Hawk size; adult transversely barred, young heavily streaked below; barring of under wing surface conspicuous in flight; the distinction between the breast patterns of adults and young must be borne clearly in mind to avoid confusion. Like next species, but considerably smaller; tail not rounded.

Nesting.—*Nest*: of sticks, twigs, and dried leaves; in trees at any height, or in hollow trees and cliff crannies—sometimes old nest of Crow or Magpie is used. *Eggs*: 2-5, bluish-, greenish-, or grayish-white, lightly or heavily spotted, blotched, marbled, or clouded with various shades of brown. Av. size, 1.53 x 1.18 (38.9 x 30). *Season*: May; one brood.

General Range.—North America in general, south to Panama. Breeds thru-out its North American range.

Range in Washington.—Rather common summer resident and migrant thru-out the State at lower and middle altitudes, more common easterly; winters irregularly.

Authorities.—*Accipiter fuscus*, Gmelin, **Baird**, Rep. Pac. R. R. Surv. IX. 1858, 19. T. C&S. L². Rh. D¹. Ra. D². Kk. B. E.

Specimens.—U. of W. P¹. Prov. B. E.

THE Hawks proper, of which this bird is a typical representative, may lack the spectacular wing-feats and noble bearing of the Falcons, but they are still very bold and rapacious birds. Indeed, it would be hard to picture a more alert and blood-thirsty creature than this sharp-taloned little Hawk as it scours the brush patches or open fields in search of feathered prey. The flight of the Sharp-shin is at times as swift as an arrow and as direct, but it is skilled in doubling and twisting; and no bird, save a Swift or a Swallow, can escape it in the open. Coming upon a flock of Blackbirds, the Hawk makes instant choice of a victim, and pounces like a flash upon it, either snatching it in mid-air, or bearing it to the ground and transfixing it with claws which pierce the vitals and cause instant death. If unsuccessful in its open attack, the Hawk will either pursue thru the mazes



Drawing by Allan Brooks.

SHARP-SHINNED HAWK
CAPTURING RUSTY SONG SPARROW.

of brush or weed, or else retire quickly to thick foliage, there to await with the patience of a statue the first stirrings of the frightened quarry. The prey when caught is held at "arm's length" until quite dead, and then either eaten on the spot or else carried up to some elevated perch.

Swallows, thru superior agility, are nearly exempt from Sharp-shin's depredations. Besides being nimble, Swallows are no mean fighters themselves. Mr. C. W. Bowles once witnessed an unprovoked attack of a Sharp-shin upon a Barn Swallow, in which the tables were neatly turned upon the assailant. The Swallow managed always to keep above his insolent foe, and harassed head and back so vigorously that the sorry Hessian beat an ignominious retreat.

Sharp-shinned Hawks may be seen on either side of the Cascades both winter and summer, but they are far commoner during migrations. They travel singly or in pairs, and the appearance of one brings an instant hush to the morning chorus. Occasionally the observer gets a perfect view of a Sharp-shin as it comes unexpectedly in sight over some woodland opening, and takes a curious turn about overhead, displaying as it sails the finely-barred pattern of its wing-linings and its long square-ended tail; but oftener the bird is aware of your presence in advance and keeps warily out of range. It is sometimes seen in the neighborhood of the poultry house, and is quite equal to carrying off a chick or young pullet unless prevented.

It is idle to try to speak a good word for this gory little Hawk; rodents and insects are eaten only occasionally, while birds of every size up to pigeons and quails are its regular diet. According to Dr. Fisher, of 107 stomachs examined containing food, 6 held poultry or game birds, "99, other birds; 6, mice; 5, insects."

Since these birds bear such a character, Mr. Bowles may be allowed to point with pride to an elegant series of their eggs which adorns his collection. A set varies in number from three to seven, but four or five is customary. They are among the handsomest of eggs, not only because of their contrasting hues, but because of their wide variation. The ground color is always a delicate greenish white but the markings are of lilac, brown, green, or red, and vary in size from a pin-point to irregular blotches covering half the egg.

The birds appear to be mated upon arrival, about the middle of April, but the nest is not prepared before the middle of the following month. The nest is usually placed in an evergreen close to the trunk and at a height from the ground of from twenty to fifty feet. Occasionally an old squirrel nest is utilized, tho oftener the birds build their own nest, of small sticks neatly lined with smaller twigs, and of so loose a construction that light appears thru any part of it when viewed from below.

Both birds assist in the duties of incubation, and they are unusually brave in the matter of sticking to the nest under fire. No amount of rapping on the

base of the tree will flush the sitting bird, and it will not often leave until the nest is almost reached. When disturbed both birds make a high-spirited defense; and the female, who is, of course, the larger, will dart at the climber so boldly as occasionally to brush him with her wings. A wrathful *yip, yip, yip, yip, yip*, is likely to accompany this attack; and the note serves again to remind one of the bird's affinity to the Cooper Hawk.

No. 202.

COOPER'S HAWK.

A. O. U. No. 333. *Accipiter cooperii* (Bonap.).

Synonym.—CHICKEN HAWK.

Description.—*Adult*: Similar to preceding species, but decidedly larger; the top of head deeper slate, or blackish; the tail slightly or considerably rounded; sides of breast often tinged with bluish gray. *Immature*: Similar to preceding species; streaking of underparts less abundant, more sharply defined, and of darker shades; belly and sometimes throat immaculate, or tending to become so. Differences between adult and young rather more clearly marked than in *A. velox*. Very variable in size. Adult male length 14.00-17.00 (355.5-431.8); wing 8.50-9.50 (215.9-241.3); tail 7.00-8.50 (177.8-215.9); bill from cere .60-.65 (15.2-16.5). Adult female length 18.00-20.00 (457.2-508); wing 9.75-11.00 (247.6-279.4); tail 8.50-10.00 (215.9-254); bill from cere .70-.80 (17.8-20.3).

Recognition Marks.—Crow size; adult heavily barred below with cinnamon-rufous; young heavily striped on breast and sides with dark brown or dusky; top of head blackish, tail long, rounded. Almost always distinguishable from *A. velox* by greater size.

Nesting.—*Nest*: of sticks and green leaves, high in trees. Sometimes a deserted Crow's nest is used. *Eggs*: 3-6, pale bluish white, sometimes spotted with light brown; subspherical. Av. size, 1.92 x 1.52 (48.8 x 38.6). *Season*: c. May 20; one brood.

General Range.—North America from southern British America south to southern Mexico. Breeds thruout its range.

Range in Washington.—Rare summer resident and migrant; doubtfully recorded from east of the Cascades.

Authorities.—*Astur cooperi*, Newberry, Rep. Pac. R. R. Surv. VI., pt. II., 1857, p. 74. T. C&S. Rh. Ss¹ (?), Kk. B. E.

Specimens.—U. of W. Prov.

IT IS hard for those of us, daffy bird-cranks, who go into a trance at the sight of a feather, to pass sentence of death upon any bird; but since we have so often said, "Let be! let be!" when the hand of the gunner was raised against the Hawk (often for no better reason than that it was a Hawk and *might* steal

chickens), we will let the law take its course in the case of this culprit. The Cooper Hawk is guilty. He is the marauder. He is *le bell diable sans merci*. Songsters are his delight (gastronomic) and Wood Warblers he regards as mere toothsome dainties. Poor devil! We will turn our backs while the guillotine falls.

One never gets a clearer insight into the possibilities of cruel rapacity than when a Cooper Hawk comes dashing up into a thicket where you have been ogling Sparrows, and baffled of his victim, stands for a moment panting in his rage, and flashing malevolence from a blood-red eye. It is as tho an emissary of the nether world had broken from cover; and one feels all the virtue of a just cause in putting him to death.

Birds form eighty per cent of Cooper Hawk's food, and young chickens are counted in whenever occasion offers. Game birds are occasionally captured, for the Cooper Hawk is a fearless brigand; but when the birds are scarce he descends to rabbits, gophers, mice, grasshoppers, crickets, and similar small quarry. Fortunately, the Cooper Hawk is not common in Washington, very much less so than the Sharp-shinned; it is so rare, indeed, that it does not figure prominently among the forces destructive to bird life.

Having chosen a nesting site, the Cooper Hawk becomes quite attached to the locality; and if undisturbed will return year after year. He haunts the vicinity like an unquiet ghost, and may be heard oftener than seen, voicing his unrest in querulous notes, *kek, kek, kek, kek, kek, kek, kek, kek*. Sometimes curiosity gets the better of caution and he throws a few circles in the open, swapping confidences, as it were, with the bird-man; and in return for the few sharp glances he bends downward, affords a full view of his short, rounded wings and his long, rounded tail. One is impressed rather with the bird's ease and nonchalance than with its swiftness in flight; but it is a master at checking and tacking, so that few of the smaller birds are a match for it in the open air, and not all of them in the mazes of the forest, which the Hawk threads relentlessly.

In nesting, the bird not infrequently avails itself of an old Crow's nest, taking pains to fill up the nesting hollow with twigs, and adding a few twigs yearly in a desultory way. Occasionally it appears to construct quite pretentious nests of its own, and in the absence of trees is said to build upon the ground.

The only records for western Washington are of two nests with young, located in June, 1904, by Mr. Ed. L. Currier, of Tacoma; and one containing five fresh eggs taken May 30, 1905, by Messrs. C. W. and J. H. Bowles. In the last-named instance the nest bore evidence of occupation for many years. It was placed at a height of 70 feet in a large fir tree, surrounded by a dense growth of firs and maples, on low moist ground. The lining consisted of freshly-broken fir twigs to which the green needles still clung.

No. 203.

AMERICAN GOSHAWK.

A. O. U. No. 334. *Astur atricapillus* (Wils.).**Synonyms.**—GOOSE HAWK. BLUE HEN HAWK. BLUE DARTER.

Description.—*Adult*: Above slaty-gray with darker shaft-lines; darker, almost black on head; white lines over and behind eye loosely connected by ill-concealed basal white of cervical feathers; auriculars blackish; tail with four dusky bands, plain, or almost obsolete; inner webs of wing-quills mottled,—dusky and whitish; entire underparts white, finely and heavily marbled with slaty gray, in fine wavy or zigzag lines, falling into fine bars on flanks and tibiae, with blackish shaft-lines on throat and breast; iris light yellow; bill dark blue; feet yellow, claws black. *Immature*: Following the *Accipiter* fashion; above dark brown, spotted with buff and whitish and margined with rusty; tail with narrow white tip and four distinct dusky bands; below whitish or buffy, *striped* narrowly with dark brown,—the markings guttate on belly, broader on sides and flanks. Adult male length about 22.00 (558.8); wing 12.00-13.50 (304.8-342.9); tail 9.50-10.50 (241.3-266.7); bill from nostril .75 (19.1). Adult female length about 24.00 (609.6); wing 13.25-14.25 (336.6-362); tail 11.00-12.50 (279.4-317.5).

Recognition Marks.—Crow to Brant size; adult slaty blue above, white mottled with slaty gray below; rather short, rounded wings; white line over eye; not so finely pencilled below as succeeding; lighter.

Nesting.—Not definitely known to breed in Washington. *Nest*: high in trees, usually coniferous, of sticks, twigs, and grass, lined with bark-strips and grass. *Eggs*: 2-5, "white or glaucous white, sometimes very faintly marked with pale brownish." Av. size, 2.32 x 1.79 (58.9 x 45.5). *Season*: April 10-May 20; one brood.

General Range.—Northern and eastern North America, south in winter to the Middle States and southern Rocky Mountain region; casually west to Oregon. Accidental in England. Breeding range restricted to the Canadian fauna of the United States and northward.

Range in Washington.—Imperfectly made out as regards succeeding form, —possibly casual in winter.

Authorities.—*Astur atricapillus* (Wils.) Bonap., **Brewster**, Bull. Nutt. Orn. Club. Vol. VII. No. 4, Oct. 1882, p. 227 & 231. Publication based on four specimens submitted by Capt. Chas. Bendire and by him obtained at Fort Walla Walla, Wn., during the autumn and winter of 1881-1882. Bendire afterwards (Life Histories, Vol. I, p. 199) gave it as his opinion that all the birds which he secured in the Northwest region were *A. a. striatulus*, save one which was intermediate in character.

Specimens.—Prov. B.

IN THE light of our present very imperfect knowledge of the distribution of the Goshawks, it would appear probable that *striatulus* is the

breeding form occurring thruout the State; while the more lightly marked *atricapillus* is the form found in winter and during migrations. Mr. Brewster refers^a two specimens taken by Captain Bendire "in the immediate vicinity of Walla Walla during the autumn and winter of 1881-82" to the typical form, while doubtfully consigning two others from the same lot to the sub-species. Dr. Merrill refers^b all specimens taken at Fort Sherman, Idaho, to this form, and notes that the bird is rather common during the migrations and in winter. Mr. Brooks says^c: "I have taken both forms east and west of the Cascades. The latter [i. e. *striatulus*] seems to be the only form that breeds in southern British Columbia where I have noticed it in summer as far east as Arrow Lake. The two sub-species intergrade perfectly."

No. 204.

WESTERN GOSHAWK.

A. O. U. No. 334 a. ***Astur atricapillus striatulus*** Ridgw.

Synonyms.—As in preceding.

Description.—Similar to *A. atricapillus* but darker; above dark plumbeous to sooty blackish; underparts so finely and closely marked as to appear nearly uniform blue-gray, finely pencilled with black shaft-lines. *Young birds* are of a darker brown above than those of *A. atricapillus* and the striping of underparts is broader, inclining to pure black.

Recognition Marks.—As in preceding, darker.

Nesting.—As in *A. atricapillus*.

General Range.—Western North America, chiefly coastwise, breeding from the Sierra Nevadas in California in Latitude 39° north to Sitka; east regularly to Idaho and western Alberta, casually (?) to Colorado.

Range in Washington.—Not uncommon resident in heavily timbered sections, chiefly in the mountains.

Authorities.—*Astur atricapillus*, Wils. **Baird**, Rep. Pac. R. R. Surv. IX. 1858, 15 & 16 [part (?)]. Dawson, Auk, Vol. XVIII. Oct. 1901, p. 403. C&S. B. E.

Specimens.—(U. of W.) 1[♂]. Prov. B. BN. E.

A MILD experience of the feelings of a chicken befell my partner upon a time when we were camped on the Stehekin trail. It was late in June and

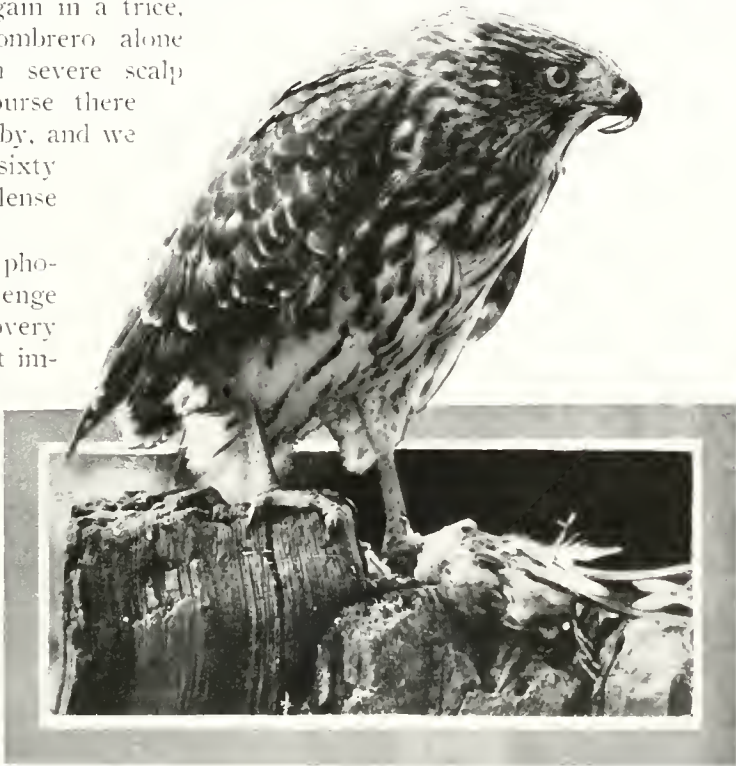
a. See "Authorities" above.

b. Auk, Vol. XIV., Oct. 1897, p. 352.

c. Auk, Vol. XVII., Apr. 1900, p. 104.

the ornithologist was not aware that a certain stretch of woods which the trail cleft belonged to a highly virtuous pair of Goshawks, until Whoof! Biff! the blue terror struck a blow from behind and sent the bird-man sprawling. He had, moreover, quick need to defend himself with sticks and stones, for the bird was back again in a trice, and a tough sombrero alone saved him from severe scalp wounds. Of course there was a nest hard by, and we found it, some sixty feet up, in a dense stand of fir trees.

I accepted the photographic challenge which the discovery afforded, but first improvised a coat of mail, wherein a stuffed knapsack did duty for a helmet, and a wrapping of dunnage bags was designed to protect the shoulders. Like Don Quixote, I set out to meet my foe, but the gentile bird had respect for knighthood even



Taken near Spokane.

Photo by W. H. Wright.

AN INTERRUPTED MEAL.
THE YOUNG GOSHAWK HAS CAPTURED A ROBIN.

of this decadent type, and forbore to offer further indignities. As she left the lists she indulged a stentorian cackle, *ak, ak, ak, ak*, a note which reminded one again of the Cooper Hawk, save that it had a deal more of menace in it.

Fortunately for our game and poultry, the "Blue Hawk" is comparatively rare in Washington. It appears to be confined during the nesting season to the timbered regions of the Cascades and Blue Mountains. Here it haunts the darkest woods as well as the open heights, and makes Grouse and Ptarmigan the special object of its attack. At other seasons it invades the lower valleys and coastal regions, but is no longer a well-known bird.

The Western Goshawk is excelled by none in display of cunning or

proWess. At times, indeed, the thirst for blood appears to dull its discretion, and it will return to seize a fowl even after it has been shot at; but oftener it marks the gunner from a distance and awaits the unguarded moment at the poultry-yard. After sighting game, this Hawk does not soar and hover, after the manner of the Prairie Falcon; rather it approaches in a horizontal direction at a low elevation and under partial cover of vegetation, then darts down suddenly or makes a quick side turn, seizing its victim deftly, and off again to a distant station. Having once got the lie of the land, a Goshawk will make requisition on a poultry-yard two or three times a day, and may elude capture altogether, be the owner never so incensed over his losses.

"Nidification begins early, usually about the latter part of March or the beginning of April, long before the snow has disappeared from the mountains, and while the hillsides are still saturated with moisture, making it anything but easy work to look for their nests. These are usually built in tall trees and no particular preference seems to be shown in their selection. The nests are mostly placed close to the trunk and generally well hidden from view. Occasionally one is placed some distance out, or between the forks of one of the larger limbs, and on that account can be more readily seen. I believe each of these birds has its regular hunting range, from which all other species of Raptores are driven off. At any rate I have never found the Western Red-tailed or Swainson's Hawks, the most common kinds found, breeding in the vicinity of a pair of Goshawks" (Bendire).

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No. 205.

WESTERN RED-TAIL.

A. O. U. No. 337 b. **Buteo borealis calurus** (Cassin).

Synonyms.—WESTERN RED-TAILED HAWK. WESTERN RED-TAILED BUZZARD. BLACK RED-TAIL. CHICKEN HAWK. HEN HAWK.

[*Description of typical form, Buteo borealis.*—*Adult:* Above dark brown, fuscous, and grayish brown, varied by rusty or ochraceous edgings, and out-cropping whitish, especially about head and neck; primaries blackish-tipped, the first four deeply emarginate, the inner ones indistinctly banded; tail deep rufous, crossed near end by a single narrow bar of blackish; lighter from below,—vinaceous or pearly pink; underparts white or buffy white, rufous- and brown-shaded on sides of neck and breast, nearly meeting in center; throat and upper breast with dusky, lanceolate streaks; sides with rhomboidal spots or transverse bars of rufous and dusky in various patterns, nearly meeting across belly; shanks faintly barred with rusty; bill plumbeous; tarsus yellow, very stout; claws black. *Immature:* Similar to adult but more uniform in coloration,—little buffy or

ochraceous; markings on sides of breast and belly blackish, clear-cut; tail entirely different,—grayish brown crossed by nine or ten distinct narrow bands of blackish.]

Description.—*Adult*: Plumage chiefly blackish, sometimes uniform sooty, except tail and its upper coverts; individually variable between form nearly as light as *B. borealis* and deepest sooty brown; breast usually extensively rufous, and lower belly with more or less white, but these colors obliterated in completely melanistic specimens; tail as in *borealis*, with a conspicuous black subterminal bar and often with several more or less complete additional bars. *Immature*: As in *borealis* but darker thruout and more heavily spotted below; the plumage (except tail) sometimes wholly dusky as in adult. Adult male, length: 19.00-22.50 (482.6-571.5); wing 15.25 (387.4); tail 9.25 (235); culmen from cere about 1.00 (25.4); tarsus 3.00 (76.2). Adult female, length: 22.50-25.00 (571.5-635); wing 17.00 (431.8); tail 10.00 (254); culmen 1.10 (27.9); tarsus 3.30 (83.8).

Recognition Marks.—Crow to Brant size; red tail of adult distinctive; stouter proportions and more regal bearing as compared with *B. savainsonii*.

Nesting.—*Nest*: a mass of sticks indifferently lined, or not at all, placed on ledges of cliffs (East-side) or high in trees; sometimes an old Crow's nest is refitted. *Eggs*: 2-4, bluish white, stained, spotted, or blotched with reddish brown, or, rarely, immaculate. Av. size, 2.40 x 1.83 (61 x 46.5). *Season*: April; one brood.

General Range.—Western North America, chiefly within the United States, from the Plains to the Pacific and south to Guatemala.

Range in Washington.—East-side, common summer resident; West-side, not common summer resident, and casual resident in winter.

Authorities.—*Butco montanus*, Newberry, Rep. Pac. R. R. Surv. VI. pt. IV. 1857, p. 75. T(?). C&S. L². D¹. Sr. Ra. D². Ss¹. Ss². Kk. J. B. E.

Specimens.—(U. of W.) Prov. B.

A "BURKE'S PEERAGE" of the birds might not mention the Buteos under the head of royalty—*Falco* and *Aquila* are the autocrats *par excellence*—but Red-tail's patent of nobility is very ancient, and is based upon the same claims as those which human lords have set up; viz., a predatory ancestry, unbroken possession of certain broad acres for many centuries, and a frowning castle upon some sightly hill. In this last respect the bird is not surpassed, in Washington at least, by that arrogant old Hapsburg, the Prairie Falcon himself—of whom anon.

As to the broad acres, chiefly game preserves (to carry out the whimsy), the royal claim comes first (because, forsooth, the Falcon is the swifter bird); and there is always a horde of retainers—Sparrow Hawks, Burrowing Owls, Magpies, and Ravens—to consider, before the overlord may count his yearly rental of ground-squirrels, rabbits, mice, snakes, lizards, and the lesser fry. Moreover, in these evil days, the pirate Danes have swept down on the Red-tail's coasts, have torn his acres with the plow and have burnt his gopher fields with fire. Worst of all, these ruthless invaders, having no use them-

selves for sage-rats, yet deny them to their rightful owner, the Red-tail; and they pursue him fiercely with engines of destruction when he ventures to sample an imported Danish fowl. Verily these be troublous times for the aristocracy. Mackaday!

Truth to tell, there is no more foolish obsession which afflicts farmer folk than this: that all Hawks should be killed at sight; unless it be this other: that all birds caught eating cherries are worthy of death. Penny wise pound foolish, both of them! The man who is worst injured by this folly is, of course, the farmer himself, but society also suffers thru him. Why—it is as if the man should send a charge of buckshot thru a boy who stooped to pluck a strawberry—the while he cared nothing that the cattle were ravaging his wheatfield for lack of that same small boy to drive them out. Listen; it is no exaggeration to say, that, insofar as the three most easily slaughtered species of Hawk are concerned, the Marsh Hawk, Swainson's and the Red-tail, any farmer in the wheat-growing sections of this State could well afford to raise a hundred chickens annually and *feed them to the birds*, if by so doing he could secure immunity from the ravages of rodent pests. Yes; the excess of wheat which the pests destroy annually in root and in blade would feed the chicks and repay the trouble tenfold.

Red-tailed Hawks no longer abound in this or any other section. Such as occur are found both east and west of the Cascades. In the Puget Sound country they appear only in the more open situations, on prairies and the borders of clearings. On both sides they are partially resident, but least so on the eastern plateaus, where the winters are severe. By nature this handsome bird is little afraid of man. Young birds, tho capable of sustained flight, refuse to believe ill of their human neighbors, to whom they have done no harm, and they fall easy victims to the prevalent bangitis. Older birds may halt on the tree-top for a fraction of a second too long, if they suppose the gunner is passing by and minding his own business; but if they catch the glint of intent in the human eye at a hundred yards, they are off—and safe.

The Red-tailed Hawk is a soaring bird, a *buzzard*, to speak accurately, altho the word has fallen needlessly into disrepute. Buzzard is a mere reappearance, thru the French, of the Latin *Buteo*. This doubtless from a primitive root now lost, *bu* or *bou*. One can almost see in this explosive syllable the utterance of a child struck with wonder at the near passage of some soaring Hawk. "*Bou!*" "See, Mamma (Ligurian or Latin matters not), big bird!" The wonder of it lies no less upon us of more thoughtful years—the wonder of flight, the beauty and the witchery of those lazy, high-flung circles. How consonant with sunshine and shimmering air and, anon, with peace itself, are those mystic circles of endless, unimpassioned quest!

Our buzzard is seen to best advantage on the sage-brush plains, and especially if there be some outcropping of lava handy, where he may build

his nest. This is a mere platform of sticks laid on a convenient and commanding ledge. The Red-tails exhibit some sagacity in placing it beyond the reach of coyotes and raccoons; and the choice of such romantic situations raises the bird several degrees in the estimation of one who has known it heretofore only as a tree-dweller. The birds, as likely as not, betray their anxiety by sending down from some far height a strong, petulant *kee daaay*. If the nest is approached, interest becomes frenzy, and the Hawks either swoop toward the intruder repeatedly, or flap restlessly to and fro, uttering their agonized cries. At other times the Hawks discuss the situation in sharp notes of a shriller tone, *kccak'*, *kccak'*, *kccak'*.

The eggs, usually three in number, of a dull blueish white, unmarked, or else blotched and clouded with rufous, are laid from the first to the third week in April, according to latitude. Incubation lasts about four weeks, and the young remain in the nest five or six weeks longer. The young birds are fed exclusively on flesh, and it is a point of honor with the parents to keep an abundant supply of this on hand. What the chicks cannot eat at once is left conveniently near, on one side of the nest; and it is an easy matter, thru frequent visits, to check up on the Buteonine bill of fare.

As we stopped at a rancher's near Brook Lake, to inquire about the welfare of the birds, the young man of the place remarked casually, that he had been over on the cliffs a day or so before and had "shot a couple of them there hawks." [These people have a poultry yard worth at the outside \$100, to which they are exceedingly devoted. They also have a field of wheat which should yield twelve hundred bushels, if the "squirrels" would let it alone—but that is of no consequence.] In coasting the basaltic rampart, we found one of them, a Prairie Falcon, where it lay at the foot of the cliff. We did not find its nest, altho another pair held the ledge a little further on. The other victim was a Western Red-tail, and her carcass lay just below the eyrie, which her mate was bravely but warily defending. A very substantial bushel



Taken in Walla Walla County.

Photo by the Author.

NESTING SITE OF THE WESTERN RED-TAIL.

THE NEST MAY BE FAINTLY DISCERNED AS A LIGHTER SPOT IN THE HORIZONTAL LEDGE NEAR THE TOP OF THE CLIFF.

of sticks occupied a niche about half way up the face of an eighty-foot wall. Upon our approach the widowed bird dashed at us with angry cries, but as soon as we came near enough to mark the three hawklets, little downy, white fellows a week or so old, he mounted rapidly into the air, and described great circles of solicitude a half mile above our heads.

While aloft, a male Prairie Falcon, whose eyrie we found later, took it into his head to persecute the Red-tail. He circled about rapidly and hurled himself again and again at the Hawk, but each time, at the expected moment of contact, the Buzzard turned deftly face up, presenting his talons to the persecutor; and each time, of course, the Falcon swerved short to avoid the parry. Both the birds were very much in earnest, to judge from the harsh cries which escaped them at the moment of "present talons"; but it was evidently an old game and an idle one, too, for the Falcon, for no matter at what range or from what angle he struck, the Red-tail was always ready, with a quick half-somersault, to receive him. Conducted thus in the open in a fierce glare of sunlight, it was surely a battle for the gods to witness—even tho the issue was only a draw.

No. 206.

SWAINSON'S HAWK.

A. O. U. No. 342. *Buteo swainsoni* Bonap.

Description.—*Adult male in normal plumage:* Upperparts dark brown somewhat varied by paler or reddish brown; feathers of crown white basally, with narrow dark shaft-streaks; upper tail-coverts reddish brown and white with dusky bars (area usually conspicuous as whitish patch in flight); flight feathers slaty to dark brown (according to age), more or less varied on inner webs by darker bars alternating with whitish; tail crossed by 8 or 10 narrow blackish bands; throat pure white; chest crossed by broad band of bright chestnut marked by blackish shaft-lines; remaining underparts white varied more or less by reddish brown. *In melanistic phase,* throat pencilled with black and underparts clouded, chiefly in crosswise pattern, with chestnut; upperparts dark sooty brown. (All stages of intergradation between this and normal plumage.) Bill bluish black above and on tip, bright yellow on cere, gape, and base of lower mandible; feet blackish; iris brown. *Adult female:* Similar to male but chest-band much darker, dark chestnut to brownish black, and remaining underparts clouded and barred with chestnut or black on white ground, and white-barred posteriorly. *In melanistic phase,* dark sooty brown above. *Immature:* Above dark brown varied by tawny edgings of feathers; head, neck, and underparts, including lining of wings, dull tawny or light brown marked with blackish, head and neck sharply and narrowly streaked, breast, flanks, etc., spotted or blotched variously, with blackish; quills and rectrices somewhat as in adult but barring less distinct. Adult male, length: 19.00-20.00 (482.6-508); extent 49.00 (1244.6); wing 15.20 (386.1); tail 8.50 (215.9); tarsus

2.45 (62.2). Adult female, length: 20.50-22.00 (520.7-558.8); extent 50.00-56.00 (1270-1422.4); wing 16.00 (406.4); tail 9.50 (241.3).

Recognition Marks.—Crow size; white throat; chestnut pectoral band of male, dark chestnut and blackish of underparts in common melanistic plumage; usually displays whitish rump; tail shorter and all proportions stouter as compared with Marsh Hawk (which also has white rump); less stout and without red tail as distinguished from *B. borealis calurus*.

Nesting.—*Nest*: a stout platform of sticks lined with bark-strips and fresh leaves, placed at moderate heights in deciduous trees, sometimes on cliffs, rarely on ground. Occasionally an old nest of Crow or Magpie is refitted. *Eggs*: 1-4, usually 2, pale greenish-, bluish-, or grayish-white, sometimes tinged or obscurely spotted, rarely blotched with dull rufous. Av. size, 2.28 x 1.74 (57.9 x 44.2). *Season*: May 10-June 1; one brood.

General Range.—Western North America, from Wisconsin, Illinois, Arkansas, and Texas to the Pacific coast; north to the Arctic regions, and south to Argentine Republic. Casual east to Maine and Massachusetts. Breeds nearly thruout its North American range.

Range in Washington.—Common summer resident east of Cascades; less common resident and migrant on West-side.

Authorities.—**Brewster**, B. N. O. C. VII. Oct. 1882, p. 227. Ra. D². J. E.

Specimens.—(U. of W.) P¹. Prov. E.

SWAINSON'S HAWK, nowhere common, is still the commonest Buteo in Washington. Its plumage is subject to considerable variation; so much so, indeed, that the bird is best defined by habit and action, and known to the amateur as *not* red-tailed and *not* long-tailed, ergo, Swainson's. This Buzzard is typically a bird of the prairies, being found from the eastern edge of the Great Plains west to the Pacific Coast. It is not found commonly in the mountains, but does appear occasionally about the open places of the West-side, where it undoubtedly breeds.

Altho a prairie bird, Swainson's is a little heavy on the wing. When he flaps he does so with exaggerated zeal, as tho to prove ability in a little wonted exercise; but as a sailor, or perhaps one should say sailer, he is a past master. He leans hard upon the breeze, and it carries him whithersoever he will. He travels without propulsion other than that of the wind, for he has learned to balance gravity against wind-thrust in a fashion which not even the Wright Brothers have yet attained. But because the plains are large and its landmarks few, the Swainson Hawk is not infrequently seen at rest, upon a fence-post by the roadside, on a tall sage-bush, or upon a willow by the river's brink. In the wooded country they are seldom seen a-wing, and evidently spend much time studying the ground from the vantage point of tree-tops or commanding limbs.

Of course the bird has won the highly distinctive name of "Hen Hawk," because he looks as if he might carry off a hen. But as matter of fact, he wouldn't. He is content with far humbler quarry, such as mice, moles,

gophers, and the much-detested Columbian Ground Squirrel (*Spermophilus columbianus*). Insects, such as grasshoppers, crickets, beetles, and the like, form an even greater proportion of its food, and the Hawk is to be regarded as highly beneficial. No more eloquent testimony could be adduced for its harmlessness than the almost habitual nesting of smaller birds in the same tree with a Swainson Hawk.

The nest is seldom placed very high up, usually at a height of fifteen or twenty feet in a small tree, as a willow or alder. The nesting platform is rather small for the size of the bird, measuring as it does, less than two feet in diameter by a foot or such a matter in depth. It is composed entirely of sticks, but is lined afresh each year with dried grass, bark strips, or small leafy twigs. One seen in Benton County contained a quantity of the flowering twigs of a willow (*Salix amygdaloides*) and had quite a pleasing appearance.

The Hawks spend a good deal of time in the vicinity of their nests even before deposition of eggs has begun; and if a first set is taken the female is very likely to entrust a second to the same nest. Two or three, rarely four, eggs are laid, each at intervals of two days, and they require twenty-eight days of incubation. Eggs are rarely deposited before the middle of May, so that the young are not often a-wing before the last week in July. Always

unwary, except where unjustly persecuted, the Swainson Hawk will often allow a near inspection of its person; while a young bird imagines you are joking, and gapes appreciatively when you fling it a tentative clod from the roadside.

Swainson's Hawk is the most conspicuously migratory of any of the Hawks, and it sometimes travels in great companies numbering over a thousand individuals. Such a notable movement the author witnessed as a child in western Kansas. An east-and-west-lying creek bed presented in its fringing



Taken on Moses Lake. Photo by Dawson and Bowles.

NEST OF SWAINSON HAWK IN WILLOW.

timber of elm the only opportunity for shelter to be had for miles in either direction. Into the more prominent trees of this coveted timber on a late October afternoon came a large detachment of migratory Hawks, to the number of a thousand or so. No doubt the Swainson Hawks formed the bulk of the predatory host gone into camp for the night, but the most notable feature of the gathering was the variety of its constituent species. At least it seemed to an excited small boy that Hawks of every shape, size, and hue were seated before him, paying no attention to his presence, save to yawn as they reviewed the day's long journey. Shades of Audubon! What a sight! But that was before the days of the Graflex.

No. 207.

AMERICAN ROUGH-LEG.

A. O. U. No. 347 a. *Archibuteo lagopus sancti-johannis* (Gmel.).

Synonyms.—AMERICAN ROUGH-LEGGED HAWK. ROUGH LEGGED BUZZARD.

Description.—*Adult, normal (light) phase:* Head and neck all around white or flaxen, narrowly streaked with dark brown, sparingly on throat; remaining upperparts dark brown or brownish fuscous, varied by ochraceous or ochraceous-buffy, marginal brownish gray and outcropping white; wing-quills not barred, at least on exposed surfaces, but grayish-edged and with much basal white on inner web; four outer primaries deeply emarginate; upper tail-coverts and basal portion of tail (usually for more than half its length) white; terminal portion of tail crossed by broad, subterminal band of dusky, and usually by several narrow, irregular or broken bands anterior to this; underparts whitish, or pale ochraceous-buffy, spotted or broadly streaked, chiefly on breast, with blackish; a loose broken band of dusky across belly; thighs often ochraceous; tarsi feathered to the toes, in front; feet yellow; bill and claws black. *Immature, normal phase:* Similar to adult, but terminal portion of tail plain grayish brown; primaries with basal white on *external* web; markings of underparts confluent on belly in a broad, unbroken, abdominal belt of deep brown; thighs spotted with dusky. *Adult and immature, melanistic phase:* Entire plumage black, in any degree, save that the tail is white-barred and primaries exhibit some basal white. This phase is quite common and seems to be independent of age, sex, or season. Both sexes, length: 19.50-23.50 (495.3-596.9); wing 15.75-18.00 (400.1-475.2); tail 9.00-11.00 (228.6-279.4); culmen from cere .80-.90 (20.3-22.9). Female about two inches longer than male and correspondingly proportioned.

Recognition Marks.—Brant size; feathered tarsi distinctive; best recognized in the field by its, usually, dark coloration and heavy flight; basal white of tail also distinctive if properly discriminated from that of the upper tail-coverts of the Marsh Hawk.

Nesting.—Not known to breed in Washington. *Nest:* a bulky affair placed high in trees or on ledges of rock; of sticks, fairly well-lined with bark strips,

leaves, and soft materials. *Eggs*: 2 or 3, sometimes 4 or 5, bluish white or dull white, sometimes unmarked, but oftener spotted, blotched, or streaked with reddish brown or chocolate. Av. size, 2.22×1.78 (56.4×44.7).

General Range.—North America north of Mexico, breeding north of the United States (excepting in Alaska).

Range in Washington.—Not common migrant and winter resident, chiefly east of the Cascades.

Authorities.—*Archibuteo lagopus* Gmelin, **Cassin**, Rep. Pac. R. R. Surv. IX, 1858, p. 33. T. C&S. D^c. D^c.

Specimens.—Prov. C.

A LARGE, dark-colored bird, "bigger than a Hawk and not as big as an Eagle," seen in winter flying heavily to and fro across the meadow at a low height, or perching for considerable stretches of time on pasture boulders, fence posts, or low stubs, commanding open situations, may safely be put down in the note-book as an American Rough-legged Buzzard. If seen in air the bird may remind one of a Turkey Vulture out of season, but a second glance will take account of its fan-shaped tail, its shorter wings, and rather more rapid movement. The species is largely crepuscular, almost nocturnal, in habit, and is to be looked for on dark days rather than bright ones. Its food consists almost exclusively of field mice and other small rodents, altho an occasional rabbit may vary its fare.

As might be inferred from the humble nature of its quarry, the Rough-leg is a peaceable bird, rather sluggish in movement, and, except where persecuted, quite unsuspicious of man. While hopelessly "ignoble" from the Falconer's standpoint, the bird has a fine presence and a bright eye; and it would seem to deserve the name "gentle," rather better than does the rapacious Peregrine. Its occasional presence with us in winter is entirely beneficial, and the bird should be carefully protected.

Evidently considerable confusion has always existed as between this and the succeeding species, *A. ferrugineus*. The latter is typically white below, but is not infrequently melanistic, and I believe that dark specimens are more frequent upon the Pacific Coast than on the Great Plains. The American Rough-leg is almost anything in plumage, from lightly mottled brown to black, and its general appearance is exceedingly variable. I have seen specimens in Washington in June and July which I referred to this species; and Dr. Cooper^a mentions that he saw young birds near the mouth of the Columbia River in July 1855; yet I am inclined to think that *ferrugineus* is the only breeding form in Washington and that all references to the occurrence of *sancti-johannis* hereabouts in summer are due to puzzling disguises of the "Squirrel Hawk."

a. Rep. Pac. R. R. Surv., Vol. XII., p. II., 1860, p. 149.

No. 208.

FERRUGINOUS ROUGH-LEG.

A. O. U. No. 348. *Archibuteo ferrugineus* (Licht.).

Synonyms.—FERRUGINOUS ROUGH-LEGGED BUZZARD. SQUIRREL HAWK. CALIFORNIA SQUIRREL HAWK.

Description.—*Adults, normal phase:* Back, wing-coverts, and rump mingled blackish and chestnut-brown, each feather darker centrally and edged with chestnut; primaries blackish with glaucous bloom on outer webs, shafts chiefly white, and inner webs largely whitish; the remaining quills similar but more or less blackish- and whitish-banded on inner webs; tail below, silvery white, above mingled ashy and ferruginous with white base and tip; head above and sides black-and-white-streaked in about equal amounts; underparts chiefly white; flanks, flags, and tarsi strongly tinged with rusty red and marked with blackish; also more or less marking of chestnut on belly and sides, and some sharp blackish shaft-streaks on breast. *Adults, melanistic phase:* Above rich chocolate-brown; below mingled rusty and chocolate; tail unchanged. Bill dark bluish; feet and cere yellow; irides light brown or yellow. *Immature:* Upperparts grayish brown with tawny edgings; tail without ashy, white for basal third, remainder grayish brown, crossed by several indistinct dusky bands; underparts nearly pure white, not tinged with rusty posteriorly, but somewhat marked with dusky. Adult male, length: 22.50 (571.5); extent 54.50 (1384.2); wing 16.60 (421.6); tail 10.00 (254); tarsus 2.75 (69.9). Adult female, length: 23.75 (603.3); extent 56.50 (1435); wing 18.00 (457.2); tail 10.75 (273.1).

Recognition Marks.—Brant size; soaring flight or sluggish flapping; strong mingling of rusty red distinctive in any plumage; white of underparts shading to rusty posteriorly of normal plumage unique.

Nesting.—*Nest:* a bulky platform of sticks on ledge or cliff, rarely in trees; lined with fresh twigs and green branches, or variously. *Eggs:* 2-4, pale greenish blue or bluish white, unmarked, or else washed and tinged, rarely spotted or blotched, with pale rufous brown or dull brown. Av. size 2.55 x 1.95 (64.8 x 49.5). *Season:* April (Chelan, April 10, 1896); one brood.

General Range.—Western North America, from the plains (eastern North Dakota to Texas) westward to the Pacific, and from the Saskatchewan region south into Mexico; casually east to Illinois. Breeds from Utah, Colorado, and Kansas northward to the Saskatchewan Plains.

Range in Washington.—Not common summer resident east of the Cascades.

Authorities.—[C. & S. Rep. Pac. R. R. Surv. XII., p. II., 1860, p. 149. "Vicinity of Fort Dalles O. T." Not a valid Washington record.] **Brewster,** B. N. O. C. VII., 1882, p. 227. (C&S.) D¹, D².

Specimens.—C.

EAGLE-LIKE birds are still seen soaring about the lava ranges and the more desolate gorges of the foothills in eastern Washington, but the arch-buzzards are no longer so plentiful in the West that close and comparative study is easy. Our experience of this bird in the State is limited chiefly to the taking of a set of eggs in Chelan County (then Okanogan County) in the spring of 1896.

On the 4th day of April, while proceeding along "the grade," or granite cut road, north of Chelan, I glanced upward and saw a large black raptor eyeing me calmly from the middle of a commanding cliff, where she was evidently busy with domestic arrangements. The situation was so bold and the road so well traveled that the bird-man scarcely slept in the interval pending examination on the 7th. The birds were again sighted on this occasion, and gave such clear evidence that the nest was occupied, that a return was made on the 10th with an equipment of ropes, gun, etc.

The nest was a bulky platform of sticks lodged midway on a projecting rock of a granite cliff, 125 feet in height. The cliff was practically perpendicular, indeed overhung slightly for the space above the nest, so that the latter enjoyed practical immunity from western showers. A small ledge led toward the nest from the side of the cliff, but fell short some twenty feet, and its precarious footholds required to be supplemented by ropes from the outset. Making fast a seventy-foot line to a pile of rocks on the brow of the cliff, I let the end fall where the ledge played out, and worked over to it by the aid of another rope suspended further along the cliff. Bare-footed and armed with an egg-scoop—a bag of muslin at the end of a ten-foot pole—and with a bowline at the waist, I clung and swung, spider-fashion, until the nest came into full view just below me. (The "bird-man" was a preacher-man then, and a little reticent as to his bird-nesting proclivities—hence the foolhardiness of a single-handed attempt.) Recollections of Sindbad and the Roc came to mind at this juncture, but he is thrice armed who hath his cause just. Science (with a large S) will bolster a weak heart, and it will conveniently justify that pride of conquest which makes an oölogical collection a volume of personal history rather than an exact text-book in ornithology. Beside that the Rough-legs were arrant cowards. Scream they did like Eagles, but not once did they venture within gun-shot, and they sat most of the time moping helplessly on a pine-stub two hundred yards away.

The nest appeared at close quarters to be an ancient affair. Indeed, its foundations were probably older than the county road which wound beneath it. Its outlook included a variety of wild scenery. Black Butte cut the dead level of the great Columbia terrace on the north, like a shark's fin on a summer sea. The mighty river itself rolled six hundred feet below, and the Douglas County "breaks," with their shimmering gray-green bunch-grass levels and their frowning brown bastions of basalt, filled the eastern horizon. Small wonder

that the buzzards were loth to forsake their ancient citadel. Upon the platform of accumulated sticks and rubbish, some three feet in diameter, was placed a copious covering of fresh fir twigs. Slightly imbedded in these and in the few chance feathers, lay two pale blue eggs, unmarked. The matter of landing the trophies was safely accomplished, in spite of choking pressure on the short ribs, and the eggs were found to be somewhat incubated, thus assuring a "full," if not quite representative set.

No. 209.

GOLDEN EAGLE.

A. O. U. No. 349. *Aquila chrysaetos* (Linn.).

Description.—*Adults*: General plumage rich dark brown, sometimes paling on wing-coverts, etc.; the lanceolate feathers of occiput and cervix buffy-tipped and tawny-edged (scarcely "golden," but the name arises here); wing-quills and tail blackish, the latter clouded or obscurely barred for the basal two-thirds with grayish brown and whitish; tarsi, fully feathered to the toes, paler or whitish. The birds become somewhat gray with age. *Immature*: Like adult, but basal two-thirds of tail plain white contrasting with terminal black; tarsi still paler or white. Adult male length 30.00-36.00 (762-914.4); wing about 24.00 (609.6); tail about 14.50 (368.3); bill 1.60 (40.6); tarsus 3.75 (95.3). Adult female length 35.00-40.00 (889-1016); wing about 26.00 (660.4); tail 15.50 (393.7); bill 1.80 (45.7); tarsus 4.18 (106.2). Extent of wing from six and one-half to seven and one-half feet.

Recognition Marks.—Largest; not easily distinguished at distance from immature Bald Eagle; feathered tarsi, of course, distinctive.

Nesting.—*Nest*: a bulky platform of sticks, on cliffs, or, more rarely, in trees. *Eggs*: 2 or 3, dull whitish, usually speckled, spotted, blotched or stained distinctly and faintly with reddish brown. Av. size, 2.96 x 2.32 (75.2 x 58.9). *Season*: March-April; one brood.

General Range.—North America south to Mexico, and northern parts of the Eastern Hemisphere. Breeding range in the United States practically restricted to the mountainous parts of unsettled regions.

Range in Washington.—Not common resident, chiefly in the Cascade Mountains.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Coues, Vol. II. p. 188.] **Lawrence**, Auk, Vol. IX. Jan. 1892, p. 43. T. L. D. Ra. B. E.

Specimens.—P¹. Prov. C. B.N.

BECAUSE of the racial weakness for symbols and striking generalizations, we have been taught that the Golden Eagle is the embodiment of all regal qualities, including courage, magnanimity, and valor in defense

of offspring. There is some foundation for all this. In his mountain home the majestic flight of the Eagle truly befits the grandeur of the scene. Cradled on a beetling cliff and schooled in the clouds, it is little wonder that the Eagle should have become for us the symbol of both prowess and aspiration. Even in captivity there is something awful about his piercing eye, and the unrest of the royal captive appeals to all that is chivalrous in our natures.



Taken in California

GOLDEN EAGLETS.

Photo by Finley and Bohlman.

But the reputation of the Eagle race, quite as in the case of our own, has been made by a few individuals, and their feats are a revelation of the possibilities inherent in the breed rather than chapters from common life. Never shall I forget the pained disappointment over my first Eagle's nest in Okanogan County. The situation was romantic enough—a ledge of rock some three hundred and fifty feet up on the side of the gulch, and seventy-five feet clear of the talus below. At the time of my first visit, May 18th, the nest contained two eaglets about six weeks old. Armed with a stout birchen staff, I worked my way over to a secure footing within a dozen feet of the nest. The remaining distance was a nasty bit of climbing, and I preferred to await the first onslaught of the outraged parents where there would be some chance of defense. Fudge! The fire-eating birds appeared once or twice in the middle distance, but paid no more attention to the peril of their offspring than as if I had been a Magpie coveting the crumbs from the royal table.

Three weeks later I revisited the nest and put the eaglets to flight. One of the old birds came up and superintended the gliding downfall of the less capable child, but seeing her safely upon the ground immediately went away marmot-hunting in perfect unconcern. If there is one bird above another of a gentle and unsuspecting nature, I judge the Golden Eagle to be that bird. But doubtless this also is a hasty generalization.

On the cliffs of the Eocene formation near Fossil, Wyoming, I once

located a Golden Eagle's nest. The material of which these hills are composed is a kind of volcanic ash, very friable, and the birds had chosen for their eyrie a cranny in the very middle of one of the wildest of these fossil-bearing cliffs, and at a height of some seventy feet. It was practically inaccessible even by rope, for the cliff is perpendicular and deeply fissured by the action of the weather, so that the flying buttresses thus formed are ready to part and crumble at a breath. A pair of Prairie Falcons had a nest in the "next block" and they appeared to make a practice of persecuting the Eagles just for sport. I saw one of the Eagles launch out from his nest for a course across the broad valley. A Falcon took after him, altho the Eagle had a big lead. "A race," thought I. *Woof, woof, woof*, went the Eagle's wings; *clip, clip, clip, clip*, went the Falcon's. Inside of a mile the smaller bird made up the distance, scratched His Majesty's crown with his noble toes, and was up in the ether a hundred yards before the Eagle could do a thing. This process was repeated until the gentle pair passed from sight, but a few minutes later the Falcon returned to his perch, chuckling hugely.

At present the Golden Eagle is confined almost exclusively to the higher mountains, especially the Cascades. It was unknown to Cooper and Suckley, and we have only one record of its appearance on Puget Sound. The birds are practically resident wherever found, but they undoubtedly do wander off to the prairies and lowlands now and then



Taken in California.

Photo by H. T. Bohlman and W. L. Finley.

A PRINCE OF THE BLOOD ROYAL.

THE BIRD IS STILL IN THE NEST, ONE OF THE EAGLETS PREVIOUSLY SHOWN.

in fall and winter. They become very closely attached to a given stretch of territory and probably have the mountain areas pretty definitely parcelled out amongst them. Barring accidents, the birds are mated for life, and thru the regularity of their habits it becomes possible to recognize individuals at sight.

Among the foothills and along the banks of the Columbia with its tributaries, the Yellow-bellied Marmot (*Arctomys flaviventris azarus*), locally known as Woodchuck or Ground-hog, is its staple article of diet; and its cousin, the Whistler (*A. caligatus*), enjoys the same distinction in the mountains. Lesser rodents are captured on the one hand, and the young of deer, sheep, and goats on the other. Birds are not overlooked. Ducks, and occasionally Geese, are taken in midair, while Sharp-tailed Grouse and Sage Hens are seized upon the ground. The Eagle hunts chiefly in high lazy circles, from which he descends like a bolt when prey is sighted. He is also the first to appear in the case of a wounded deer or goat in the mountains. If the hunter is tardy, the Eagle gets at least the tidbits and sometimes ruins the hide. So great is the bird's solicitude in these matters that he has been accused of giving the *coup de grâce* to the dying buck. The Magpie keeps tab on the royal progress, and when he suspects that there is "something doing," hurries up to glean crumbs in the wake of his surfeited lord.

Bendire is authority for the statement that nests of the Golden Eagle are oftenest built in trees, and cites the Blue Mountains of Washington, Oregon, and Idaho as examples of this practice. In the Cascades, however, I have never found them except on cliffs. Nests are occupied year after year, save that the same pair may maintain two establishments a mile or so apart, and resort now to one and now to the other at the dictates of caution, or possibly for sanitary reasons. Each season the occupied nest is freshened up by the addition of a layer of fir boughs, having stems up to an inch or more in diameter. Deposition of eggs occurs in March, sometimes (as in the case of the Concomully nest) as early as March 1st. Incubation lasts about four weeks, and the young birds require to be cherished in the nest for a period of eight weeks longer.

Should a nest be robbed, the Eagles will not nest again that season; and if persecuted, they will refrain from nesting altogether sooner than abandon chosen territory. To those who love Nature in her wilder moods rather than the proprieties of park and garden, the passing of the Eagle is one of the saddest of the "pains of progress."

No. 210.

BALD EAGLE.

A. O. U. No. 352. *Haliaeetus leucocephalus* (Linn.)

Synonyms.—BIRD OF WASHINGTON (young). GRAY EAGLE (second year young). BLACK EAGLE (first year young).

Description.—*Adult*: Head and neck all around, and tail including coverts, pure white; remaining plumage grayish brown to brownish black; with some paler edging of feathers; bill and feet yellow; claws black. *Immature*, first year: blackish with some outcropping white of cottony-based feathers; bill black; feet yellow. Second year: grayish brown or dark brown, mottled somewhat irregularly on wings and tail (centrally) with gray and white; acquiring adult characteristics by end of third year. Second year birds are somewhat larger than adults, "overgrown puppies," and were formerly described as Washington Eagles. Science outgrew this ignorance as the nation outgrew its youth. Adult male length 30.00-36.00 (762-914.4); extent of wings seven feet; wing 21.00-26.00 (533.4-660.4); tail 11.50-15.00 (292.1-381); culmen about 2.00 (50.8); tarsus about 3.00 (76.2); middle toe and hind claw 2.75 (69.9). Adult female length 34.00-42.00 (863.6-1066.8); extent seven to eight feet; wing 24.00-28.00 (609.6-711.2); tail 13.00-16.00 (330.2-406.4); culmen about 2.20 (55.9); tarsus about 3.50 (88.9); hind claw up to two inches (50.8).

Recognition Marks.—Largest; white head and tail of adult; half-naked tarsus distinctive in any plumage.

Nesting.—*Nest*: a bulky platform of sticks high in trees, or, rarely, on cliffs, near considerable bodies of water. *Eggs*: 2 or 3, dull white or pale bluish white, unmarked but often nest-stained. Av. size, 2.89 x 2.25 (73.4 x 57.2). *Season*: about May 1st; one brood.

General Range.—North America at large, except Alaska, south to Mexico. Breeds locally thruout its range.

Range in Washington.—Formerly abundant resident west of the Cascades; now not common resident on West-side; rare or casual east of the Mountains.

Authorities.—*Haliaeetus leucocephalus* Linn., **Baird**, Rep. Pac. R. R. Surv. IX., 1858, p. 44. T. C&S. L. Rh. D¹. Ra. D². B. E.

Specimens.—(U. of W.) Prov. B.N.

IF YOU would prove conclusively that mankind has made small progress since the days of Omph, the cave-dweller, place a rifle in his hand, confront him suddenly with an Eagle sitting all unawares on a pine stub at a hundred yards, and bid him shoot. As certainly as Adam put forth his hand for the proffered apple, so surely will the finger of this, his Twentieth Century descendant, press trigger and doom to destruction the most picturesque inhabitant of lakeside and forest. And wherefore? "Why, because he is known to prey upon grouse, rabbits, and waterfowl, the killing of which is man's exclusive prerogative." Oh, pshaw! you don't really begrudge the

bird a bit of meat now and then. Besides that, it preys oftenest on fish, and dead fish at that. "Well, anyhow, it has been known to attack children." Yes; there are two or three well authenticated instances in American history (one of which I shall relate presently) in which Eagles have mistaken babies for meat. But you don't shoot your fellow-men at sight because some of them are kidnappers, do you? No; you shoot the Eagle with your 30 30 bullet for the same reason that Omph did with his flaked flint: viz., because he is big. Being big and predatory, he has become the symbol of prowess, power, dominion. Ergo, it is a proud thing to kill him. You are bigger than the Eagle. Unquestionably! Also smaller, because you are supposed to know better. When the man who begins his story at the club with "I killed an Eagle once," is hissed roundly, as he ought to be, then, and not till then, will this senseless slaughter cease.

Save where driven to the mountains by persecution, Bald Eagles are birds of the lowlands, and especially of the water-side. Fifty years ago they existed on Puget Sound and along the banks of the Columbia in almost incredible numbers. Here they had no need to plunder the Osprey, as has been so often recited; for they could obtain all the fish they wanted at first hand, either by posting on the shallows and seizing salmon as they ran, or by gleaning along shore among the weakened and exhausted fish which were cast up in windrows at the close of the season. Twenty years ago this Eagle was still a common sight along the shores and waterways of Puget Sound. His white head lighted up the depths of some wood-bound lake as we stepped forth to size up the local bird population, and his majestic flight repeatedly gladdened a tramp along the river trail. Now, all is changed. One may go out in the open for a week at a time without ever seeing an Eagle; and the only place I know where one may count with any certainty upon seeing two Eagles in a day, is along the still unfrequented western coast. Perhaps there are those whose only affections are for "Dickey birds," but give me back the Eagle, Keneu, the great war-eagle, majestic, romantic, kingly—with all his faults.

There can be little doubt that the Eagle of western Washington is less offensive than his relatives in the interior or further east. The mildness of the climate and the comparative abundance of food have thus reacted upon his character for his betterment. Mr. Bowles records an instance which he personally vouches for, on Cape Cod, Mass., where an Eagle attacked an infant. The birds were common thereabouts, owing to the fall run of herring. A woman, having left her baby creeping about in a nearby clover field, was picking blackberries near the water-side. Suddenly she was startled by the screams of the child, and horrified to see a large Eagle dragging it along the ground in attempt to fly with it. Rushing up she succeeded in frightening the bird till it dropped the baby, when she found to her relief that the

child was more scared than hurt, since the Eagle's claws had caught only in the folds of its dress.

The Bald Eagle is here eminently aquatic in its habits, and might, conceivably, if left alone, have developed all the seamanship of the Osprey. Dr. Cooper says: "I never saw it dive for a fish * * * but have seen it settle for a moment on the water to secure a dead fish, closing its wings"; while Suckley quotes Mr. Geo. Gibbs as affirming that he has seen the Bald Eagle alight in deep water and rest upon it "like a gull." Much time was spent by the bird in an earlier day upon the beach where it moved about freely in company with gulls, ravens, and crows, which were quite unconcerned at its presence. The Eagle occasionally does patrol duty ashore, after the fashion of hawk or vulture, but spends more time as a sentinel, in some commanding position on cliff or tree. The eagle eye is proverbial, little happening along the beach for a mile either way of which the bird does not take account.

"Nidification begins early. In Florida and other parts of the Gulf coast eggs are sometimes deposited in the early part of November, but generally from the 1st to the 15th of December. In the Middle States they nest occasionally in the beginning of February. * * * Usually they do not commence to lay until March, and correspondingly later as they advance northward" (Bendire).

The nests, which in this section are always placed well up in good-sized trees, are repaired and added to year by year until they come to be immense and historic structures. Not only are the trees in which they are built usually hard to climb, but it is often difficult, or well nigh impossible, to pass the bulging sides of the nest so as to obtain access to the eggs themselves.

Both sexes share the duty of incubation, which lasts about a month, and the two birds are sometimes to be seen together at the nest, the one standing, and the other squatting upon the eggs. The eggs are two, rarely three, pure white or bluish white, and are laid at intervals of two or three days. There is often quite a discrepancy in the size of the eggs, the larger presumably being laid first. If the eggs are destroyed the birds will not nest again until the following year. The young, when hatched, remain in the nest three or four months before they are able to fly, and even then sometimes require considerable urging on the part of their ambitious parents.

It is evident that those who live in the vicinity of an Eagle's nest must become very much attached to these stately birds, and view their comings and goings with unfailing interest. In some sections the protection of the local eagles is a matter of pride, and any one who attempted to molest one of them would get into serious trouble with its human neighbors. This is quite as it should be. The people of this State could far better afford to reimburse the owners of poultry and sheep for some trifling losses inflicted upon them, than they could to be deprived of the majestic presence of these symbolic birds.

The killing of a Bald Eagle ought to be a penitentiary offense, and the man who would wantonly destroy one of their monumental landmarks is beneath contempt.

Nothing, outside of human woes, could be sadder than the sight of an Eagle in a cage. Captivity is irksome at best, and the contemplation of it is seldom edifying. Yet the sight of a monkey is not so bad. Ropes and sticks and wire nettings are sources of infinite amusement to Jocko, as to his spectators. Bruin enjoys his fare of peanuts and bonbons, and might not wish to exchange his snug pit of concrete for the vicissitudes of mountain life. Caged song birds, even, have always artistic relief for their wounded spirit. But for the captive Eagle there is no consolation whatever. Befouled, disheveled, sick at heart, and aching with imprisoned forces, he can only scowl in sullen disdain at his persecutors, or mope in abject misery before them. The sight of such a captive degrades the onlooker as it outrages every sentiment of justice and fitness. We have no right to imprison creatures whose lives we cannot make reasonably happy.

No. 211.

GRAY GYRFALCON.

A. O. U. No. 354. **Falco rusticolus** Linn.

Synonyms.—GRAY JERFALCON. ICELAND GYRFALCON (sharing the name with *F. islandicus*).

Description.—*Adults:* Upperparts pale bluish gray, everywhere marked, chiefly in transverse spots and bars, with darker or slaty, these bars reduced on head and hindneck, leaving these parts noticeably lighter than back; barring of tail well marked grayish white and slaty gray; underparts white, more or less streaked and striped with the dark color of back on sides, flanks, flaps, and crissum, but general tone of underparts much lighter than that of upperparts; a slight dark mustache; eyelids, cere, and feet yellowish; bill bluish changing to yellow at base; iris brown. *Young birds* are not distinctly barred, but more uniform dark gray above, edged with lighter and more or less whitish-spotted on back and wings; below more or less streaked with dusky on lighter ground. Length of adults: 22.00-24.00 (558.8-609.6); wing 14.00-16.50 (355.6-419.1); tail 9.00-10.00 (228.6-254); culmen .95-1.00 (24.1-25.4); tarsus 2.40-2.75 (61-69.9). Female near the maximum of these dimensions.

Recognition Marks.—Gull size; larger than any local Falcon; gray tone of plumage unmistakable.

Nesting.—Does not breed in Washington. *Nest:* on cliffs. *Eggs:* 3 or 4, dull whitish, sprinkled, stained, or overlaid with dull reddish brown. Av. size, 2.30 x 1.80 (58.4 x 45.7).

General Range.—Arctic regions including southern Greenland; south rarely in winter to southern borders of United States.

Range in Washington.—Casual—one recent record of occurrence in winter.

Authorities.—? Townsend, Narrative, 1839, 331 (*Falco hyemalis*). Merrill, Auk, Vol. XIV, Oct. 1897, p. 352 (Spokane).

LINNÆUS called him *rusticolus*, a countryman, but he is no rustic,—a viking, rather, ruling the ptarmigans and lemmings of the Arctic coasts with a rod of iron. Both because of its large size and sustained prowess, this bird has been long recognized as the ranking officer of the genus *Falco*; and in the palmy days of falconry birds of this breed imported from Ultima Thule brought fancy prices. As we go further back in history we find the prowess of the Falcon still more highly venerated. Among the Greeks strength was the chief attribute of divinity, and the falcon was *hierax*, the mighty one (whence *hieros*, sacred, and *hiercus*, priest), the fit emblem of divinity so conceived.

Enjoying in its various races a circumpolar range, the Gyrfalcon winters for the most part upon its northern hunting grounds; but now and then a straggler appears within our borders. Of its occurrence in British Columbia, Mr. Brooks says^a: "A regular winter visitant west of the Cascades. Young birds are sometimes almost dark enough for *obscurus*, and adults light enough for the Iceland form. The flight of this Falcon is as a rule rather slow compared with that of other large Falcons, but when in full pursuit of a duck it gets up a tremendous velocity and can turn and twist almost as quickly as a Goshawk. In ordinary flight the wing-stroke is much shorter than a Peregrine's, and the bird when going straight away appears to be hovering like a Kestrel."

NO. 212.

PRAIRIE FALCON.

A. O. U. No. 355. *Falco mexicanus* Schlegel.

Synonyms.—MEXICAN FALCON. AMERICAN LANNER FALCON.

Description.—*Adults*: Upperparts pale grayish brown, the feathers usually more or less tinged with rusty and chiefly bordered with pale clay-color, or buffy gray anteriorly, or pale bluish gray posteriorly; color of head more nearly uniform, but streaked with dusky; occiput and hind-neck much lighter, the latter sometimes nearly pure white; outer webs of primaries not spotted but edged with paler, and inner webs indented or obscurely spotted with white; secondaries white- or fulvous-spotted on outer webs; axillars plain brown; wing-lining chiefly white, more or less spotted with brown; tail chiefly brownish gray tipped with white, but more or less indented and barred on inner webs with whitish; underparts

a. Auk, Vol. XVII., Apr. 1900, p. 105.

white, immaculate on throat, elsewhere marked with brownish gray of same shade as back, narrowly and distinctly on breast, broadly on sides and flanks, where falling into bars, sparsely on crissum, coalescing in maxillary region into broad mustache. Bill dark bluish changing to yellow at base and on much of lower mandible; feet yellow; iris brown. *Young birds* are darker above with feathers distinctly margined with light rusty, and their underparts are tinged with pale buffy and more broadly streaked;—the younger the bird the richer the coloration. *Downy young*, pure white. Length of adult male: 17.00-18.00 (431.8-457.2); wing 11.50-12.50 (292.1-317.5); tail 6.50-7.50 (165.1-190.5); culmen .75 (19.1); tarsus 2.00 (50.8). Adult female, length: 18.50-20.00 (469.9-508); wing 13.25-14.25 (336.6-362); tail 8.00-9.00 (203.2-228.6); culmen .87 (22.1); tarsus 2.25 (57.2).

Recognition Marks.—Crow size; powerful, easy flight; light brownish gray coloration with size distinguishes it from any related local species, especially the darker Peregrine; varied screaming cries.

Nesting.—*Nest*: a ledge or cranny of cliff; usually unmarked, occasionally bounded by a few sticks. *Eggs*: 4 or 5, creamy buff or pale vinaceous, heavily sprinkled or, rarely, stained and blotched with cinnamon. Av. size, 2.18 x 1.60 (55.4 x 40.6). *Season*: May 1-15; one brood.

General Range.—Western United States east to eastern border of Great Plains passing northern border into southern British Columbia, Alberta, and Assiniboia; south into Mexico.

Range in Washington.—Common summer resident in Upper Sonoran and Transition life-zones of eastern Washington; rare or casual west of the Cascades.

Authorities.—*Falco polyagrus*. **Cassin**, "Illustrations" (1856), p. 88 ("Puget's Sound").

Specimens.—1st, Prov. C.



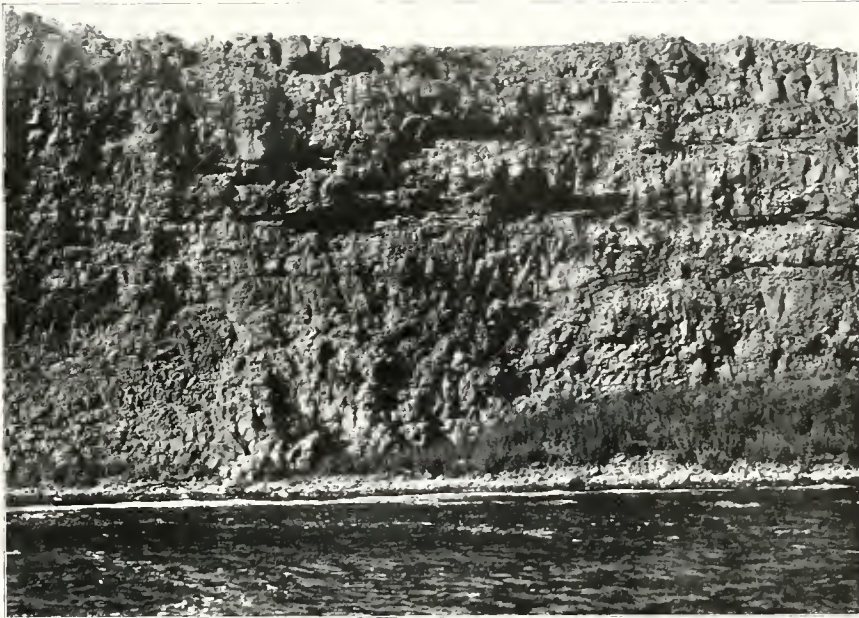
Photo by the Author.
A-WING.

IN SPITE of the fact that the Prairie Falcon is really one of the commonest raptors in the West, its discovery within the United States was not reported till 1853^a, and it long remained a rare and little-known bird. Coues in 1874^b confessed to having seen but one of them; and a set of eggs taken in 1860 by Dr. Hayden in the Wind River Mountains of Wyoming was for some years unique. In this respect the history of the Prairie Falcon shows analogy to that of certain sea fowl. Birds that have been known vaguely for years as inhabitants of the open ocean, may not be fully known until their breeding haunts are discovered,—

a. Cassin, R. of Cal. and Texas, I., p. 88, Pl. 16.
b. Birds of the Northwest (1874), p. 346.

until they are anchored, as it were, to land by the strong chains of the reproductive instinct. The Prairie Falcon is likewise a dweller of the blue serene. The level prairies and the rolling hills are his ocean, and he is a bold corsair, snatching his prey at will from the crested billow (of soil) and caring nothing for the clumsy men-of-war save to spurn them. But when spring comes on then he must seek some frowning cliff which fronts the prairie wave; and then he must place himself and those dearer than self at the mercy of the curious public, whether friendly or hostile.

The Prairie Falcon is, after the Sparrow Hawk, the commonest bird of



Taken at Brook Lake.

Photo by the Author.

AN ANCIENT STRONGHOLD.

NESTING SITES OF THE PRAIRIE FALCON, NEW AND OLD, AROUND ALONG THE FACE OF THIS WALL.

prey in eastern Washington. All undisturbed rock-walls and cliffs are likely to harbor one or more pairs of them, but the course of the Columbia River and its tributaries marks the center of their abundance. The Grand Coulee is full of them; the Okanogan Valley has its share; while the cañon of the Snake and the Columbia River gorge below Wallula are not forgotten.

All the traditions of chivalry, save gentleness, and all the associations of romance gather about this bird. In speed, in grace, in prowess and in skill, he is the peer of any; and in the choice of nesting sites he is excelled by none. Picture, if you please, a granite cleft in Okanogan County. The road at the

bottom winds deviously over intersecting talus beds, "rock slides," while the sun kissed battlements of riven rock tower on either hand to the height of a thousand feet; and they clear their own debris in sheer walls of at least half that height. About the brink of the precipice a dozen Falcons are at play. It is courting time and the birds are showing off. The females are the larger birds, but it is their turn to sit in the boxes while the aspirants perform. The doughty males are not readily contending—only renewing their vows as they come hurtling out of the heavens, screaming like all possessed and cutting parabolas whose acuteness is a marvel of the unexpected. The female screams in wild approval, or takes a turn herself because she cannot contain her fierce emotions. The rock walls resound with boisterous music, and the observer feels as tho he were witnessing the play of elemental forces—riotous, exultant, unrestrained, the very passion of freedom and conquest.

The Falcon is king of birds and he knows it. Ferocity gleams in his eye and menace quivers in his talons. Mastery is his element; his very wings flash confidence; and caution is to him a thing unknown. The much-vaunted Eagle is a craven beside him, and nothing affords the smaller bird greater delight than to hector his lethargic kinsman.

The Prairie Falcon is doubtless something of a tease at best. One observed at Brook Lake made life miserable for an inoffensive Red-tail who chanced to occupy the same ledge; and he also took elaborate pains to chase the Great Blue Herons out of bound. The Falcon would make repeated dashes at the passing hulk, but he could hardly have intended bodily injury to the Herons, for he permitted them to evade each time by ducking, and he probably enjoyed sufficiently the bellow of mingled fear and rage which he was able with each threat to elicit from the larger birds.

The flight of the Prairie Falcon is always easy and graceful, being oftenest accomplished by a succession of short wing beats alternating with a sail. The bird mounts rapidly, and if intent on distant hunting grounds, is, because of its light coloration, soon lost to eye. It is hardly possible to exaggerate the swiftness of the Falcon's flight thru comparison with that of any other bird. I should say that the White-throated Swift alone excels it.

While jogging along thru a little coulee in the Okanogan country my horse almost stepped on a Meadowlark which rose and immediately settled again within ten feet. Thinking of a possible nest, I dismounted and turned my horse's head, disturbing as I did so another lark from my very feet, and putting the first bird to flight for some two or three rods further. At that moment a Falcon flashed past my head with a quick *ldhuff*, and before I could recover from amazement, the Hawk was speeding out of sight with the lark in its talons. So instant was the Falcon's swoop that I, altho looking straight at the scene, could not have told within ten feet where the Hawk annexed the lark.

The bird makes little fuss over the capture of small game. It simply ma-

terializes out of the empty blue and picks up a gopher or a blackbird as quietly as you would pluck a flower. The approach has doubtless been nicely calculated. The thunderbolt, launched from the height of half a mile, has been checked every few hundred feet by a slight opening of the wings that the Falcon might gauge the caliber and intent of the victim; and the final plunge has, therefore, the speed and accuracy of fate. In case of larger game the quarry is knocked head-long by a crashing blow, after which the assailant turns to try conclusions as to weight. But the Falcon prefers always to snatch, and when small game is abundant, the bird is less likely to disturb rabbits or poultry.

To be honest with you, I fear the Prairie Falcon is a great nuisance sometimes. It is he who gets the chickens while Red-tail gets the shot. It would be amusing if it were not so tragic at times, to see the Fal-



*Taken
near
Chelan.*

*Photo
by the
Author.*

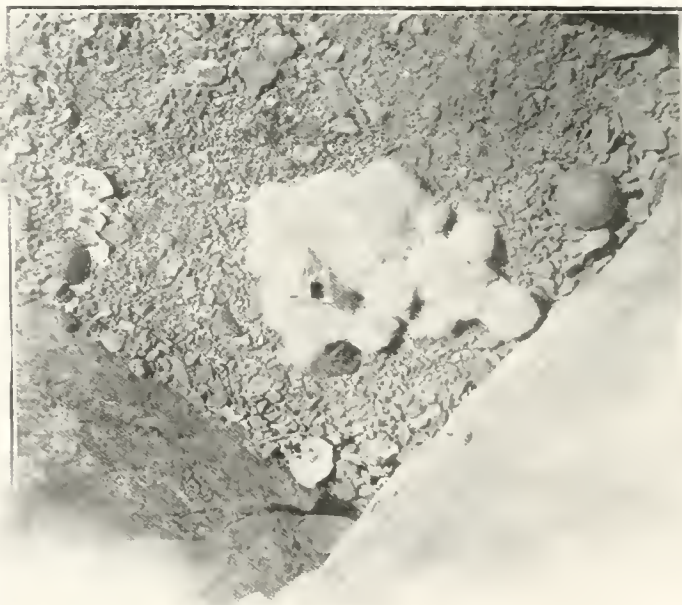
A NESTING CLIFF ON LAKE CHELAN.

WHERE THE BABIES SHOWN IN THE NEXT ILLUSTRATION WERE CRADLED.

con slip in and get his daily meat with hardly a ripple of excitement on the part of the barnyard; while every old hen squawks "bloody murder!" and the shot-gun roars, when some Buteo, guileless and guiltless, happens to stroll over the place. Wild birds are, however, the Falcon's favorite meat. Captain Bendire found them at Walla Walla fattening on Brewer's Blackbirds. Sharp-tailed Grouse have been staple on the bill of fare until latterly; and, in general, it is safe to say that where Falcons abound the bird-world pays the bills.

It is not always easy to pick out just the spot in the cliff where the Falcons are nesting. In case of doubt it is wise to approach stealthily from above, in hope of surprising the sitting bird. If her mate is off hunting, a rock rattling down the face of the cliff will cause her to dart out silently from her post. Next an outburst of screaming rage will reveal her sagacity. Her mate hurries up, and then look out for your head! The angry diving of a pair of screaming Falcons will try the nerve of the most hardy oölogist. Even when the earliest efforts are discouraged by show of stick or stones, it is not pleasant to feel the rush of the air of a passing falcon-wing upon your dishevelled locks, or to mark the instant change from the shrill uproar of impending doom to the harsh notes of baffled retreat.

When a nest is located from above, one must descend, if descent is possible, with utmost care, both for falling bones and falling stones. When first reconnoitering the nest shown in the accompanying illustration, I could not see it from above, but descended cautiously in faith. With camera slung from shoulder, and tripod in hand,



Taken on Lake Chelan.

Photo by the Author.

THE FALCON'S BROOD.



ПРОИЗВЕДЕНИЕ ЛУЧШИХ МАСТЕРОВ

УДОБНО И ПЛЕШЕ

БЕРКУТЪЕ ВЪЗДУХЪ

PEREGRINE FALCON
ABOUT 1/3 LIFE SIZE

FROM A WATER-COLOR PAINTING BY ALLAN BROOKS





William Brewster
1871

I had worked down some fifty feet over the brow of a 200-foot granite cliff, when the nesting site flashed into view. It was merely a flat accumulation of soil and detritus, held in position in a tiny "throat" by a fallen stone which had failed to clear the rocky fauces. Fifteen feet was the closest I could get with the camera, but five juicy eggs clamoring to be taken were too much for the oölogist. Cautiously down, down, I went. On the way, and indeed while photographing the Falcons' eggs from above, I had become aware of some other avian denizens somewhere, as evidenced by the lusty peepings of a callow brood. Now one, and now a nestful, clamored or were silent by turns. When I reached the platform, I found my *birds*. The Falcon eggs were upon the point of hatching. Only one had pipped, but all were singing *in ovo*. Better so! I turned and retraced my steps without disappointment—shame rather, for maternity is sacred in castle or in cabin. Farewell, brave Falcons! Let your screams of rage and defiance be changed to soft lullabies. My hour has passed.

No. 213.

PEREGRINE FALCON.

A. O. U. No. 356. *Falco peregrinus anatum* (Bonap.).

Synonyms.—AMERICAN PEREGRINE FALCON. GREAT-FOOTED FALCON. DUCK HAWK.

Description.—*Adult*: Above dark bluish ash, or slaty black with a glaucous "bloom," the feathers lighter edged, and the larger ones obscurely barred; top of head appreciably darker,—almost black; wings long, and pointed by the second quill, the first notched about two inches from the end; primaries distinctly barred on the inner webs with ochraceous; tail and upper tail-coverts narrowly barred with ashy-gray and blackish, whitish-tipped; area below eye, produced downward as broad "moustache," sooty black; throat and chest white or buffy, immaculate or nearly so; remaining underparts white or buffy, everywhere heavily spotted, on breast with blackish crescentic marks, posteriorly lengthening into braces and bars; tarsus feathered two-fifths of the way down; toes and claws lengthened; bill blue-black, but with cere and much of base yellow; feet yellow; claws black. *Immature*: Above sooty brown, plain or with some glaucous bloom with advancing age; feathers not barred, but more broadly and distinctly edged with ochraceous buff; top of head lighter than back by reason of ochraceous and whitish admixture; bars of tail obsolete on central feathers; below heavily *striped* with sooty brown, or if barred, only on flanks; chest never immaculate,—narrowly streaked with sooty brown; prevailing color of underparts deeper buffy or ochraceous than in adults. Adult male, length: 15.50-18.00 (393.7-457.2); wing 11.50-13.00 (292.1-330.2); tail 6.00-7.75 (152.4-196.9); culmen .77 (19.6). Adult female, length: 18.00-20.00 (457.2-508); wing 13.50-14.75 (342.9-374.7); tail 7.00-9.25 (177.8-235); culmen .95 (24.1).

Recognition Marks.—Crow size; dark coloration; black "moustache"; long pointed wings; swift, easy flight.

Nesting.—*Nest*: on ledges of cliffs, or in hollow limbs of the tallest trees. *Eggs*: 3 or 4, creamy-white, buffy, light hazel, or rich cinnamon-brown, in the latter cases sometimes plain, otherwise finely sprinkled, spotted and blotched with reddish brown or chocolate. Av. size, 2.05 x 1.65 (52.1 x 41.9). *Season*: c. May 1st; one brood.

General Range.—North America at large and south to Chili. Breeds locally thruout most of its United States range.

Range in Washington.—Not common resident thruout the State, giving place to *F. p. pealei* at least upon West Coast. Local range chiefly determined by presence of suitable cliffs overlooking water.

Authorities.—? Orn. Com. Journ. Ac. Nat. Sci. Phila. VII., 1837, 193 ("from the Columbia River"). *Falco nigriceps*, **Cassin**, Rep. Pac. R. R. Surv., Vol IX., 1858, p. 8 (part?). T. L.? Ra. D? B. E.

Specimens.—Prov. B.

THE name Duck Hawk is really a tribute to the skill and prowess of this highly endowed bird; but it is belittling, nevertheless, to institute a comparison, however remote, between the noble Peregrine and the multitudinous "Hen Hawk" of the vulgar conception. This is the *PEREGRINE FALCON*, if you please, the American bird being not different, save for a somewhat whiter breast (which only enhances his beauty) from the "falcon gentil" of song and story, the most courageous, the most spirited of all birds of prey. Like the Prairie Falcon, it secures an intended victim either by striking it from above and bearing it down to earth by its acquired momentum, or else by snatching it from the ground with incredible swiftness. Many stories are told of its seizing and making off with wounded game from under the very nose of the hunter; and it is especially fearless in its pursuit of wild ducks, which it is said to follow systematically for days at a time during the migrations.

It is undeniable that chickens occasionally fall victims to this dark corsair, but Bendire is of opinion that the Falcon rather disdains such stupid quarry, and is sure that they sometimes engage in the pursuit of poultry from sheer mischief without intention of harm. Certainly the Peregrine need not deny himself any luxury which his appetite craves, and young meteors would be quite in his line if they were only a little more juicy.

The Peregrines are not common in eastern Washington, being largely supplanted by *F. mexicanus*; and no instances of their nesting east of the mountains have come to our attention, altho they undoubtedly do so. In flight they may be distinguished by greater size and darker color, as well as by a habit of rearing and plunging. This characteristic motion consists of four or five strong strokes which send the bird forward and upward, after which it nearly closes its wings and makes a rolling plunge down to its original level, and repeats as before.

For a nesting site this Falcon chooses a commanding cliff, and preferably one which lays a considerable territory of water under tribute. A pair which has taken up its abode upon the picturesque bastions of Waldron Head appears to lack nothing. The hill itself boasts Gulls, Meadowlarks, and Mountain Quail; while the neighboring colonies on Flattop and Gull Island offer quite a range of delicacies. Once, when we happened to be on Flattop, the morning marketing of the Waldron Peregrine stirred up quite a commotion among the sea fowl. A constant outcry attended his movements, and the Gulls pursued him valiantly. Amusing to relate, a pair of Fish Crows, eager, no doubt, to obtain a pretext for distracting attention from their own odious persons, were leading in the chase, crying, "Stop thief!" in a most virtuous key. Faugh! Their own gullets were crammed with Cormorant eggs at the very moment

No. 214.

PEALE'S FALCON.

A. O. U. No. 356 a. **Falco peregrinus pealei** Ridgway.

Description.—*Adults*: Similar to *F. p. anatum*, but darker; above slaty black; no contrast between pileum and back; anteriorly the feathers are lightly tipped with ochraceous, posteriorly with lighter ochraceous or gray; underparts very heavily marked with sooty black (or black with a tinge of red and a subdued glaucous bloom) on ochraceous ground,—the marking is chiefly longitudinal and becomes barring only on crissum and under tail-coverts. *Young birds* lack the rusty feather-tips of adult and are often so dark below as more properly to be defined as sooty black, streaked with pale ochraceous. Length as in preceding form.

Recognition Marks.—Crow size; dark coloration; no contrast in shade between pileum and back.

Nesting.—Much as in preceding; chiefly confined to sea-cliffs.

General Range.—Pacific Coast region from Oregon to the Aleutian and Commander Islands, breeding thruout its range.

Range in Washington.—Imperfectly defined as regarding preceding form—at least western coast and probably northern coast of Olympic peninsula.

Authorities.—*Falco nigriceps*, **Cassin**, Rep. Pac. R. R. Surv. IX., 1858, p. 8 (part). C&S. Rh.

Specimens.—Prov.

IT would be impossible to adjudicate the boundaries between *F. p. anatum* and *F. p. pealei* without killing every falcon in western Washington; and this, however much we should earn the gratitude of the water fowl, we do not feel prepared to do. Suffice it to say, that *pealei* is, on theory, a saturated form,

a heavily colored bird, whose plumage is the result of racial centuries spent in a region of heavy rainfall. It ought, therefore, to occur along the cliffs and islands of our western coast, where the annual rainfall ranges upward of a hundred inches. Cooper's specimens taken at Shoalwater Bay in 1854, are rated as *pealei*; and a female taken by myself on Carroll Islet, June 22, 1907, supports the assumption.



Taken on Carroll Islet.

Photo by the Author.

MASTER PEALE

very solicitous parents, who guarded his every movement and published screaming bulletins of our progress—an attention which, by the way, began to pall upon our senses by the end of the fourth day.

The clamor was renewed as often as we appeared near Master Peale's favorite perch, an old dead spruce tree; and the old birds, when they could no longer control their indignation afoot, relieved their pent-up feelings by giddy swoops and sallies, or else took a turn around the sea-wall, screaming frightfully.

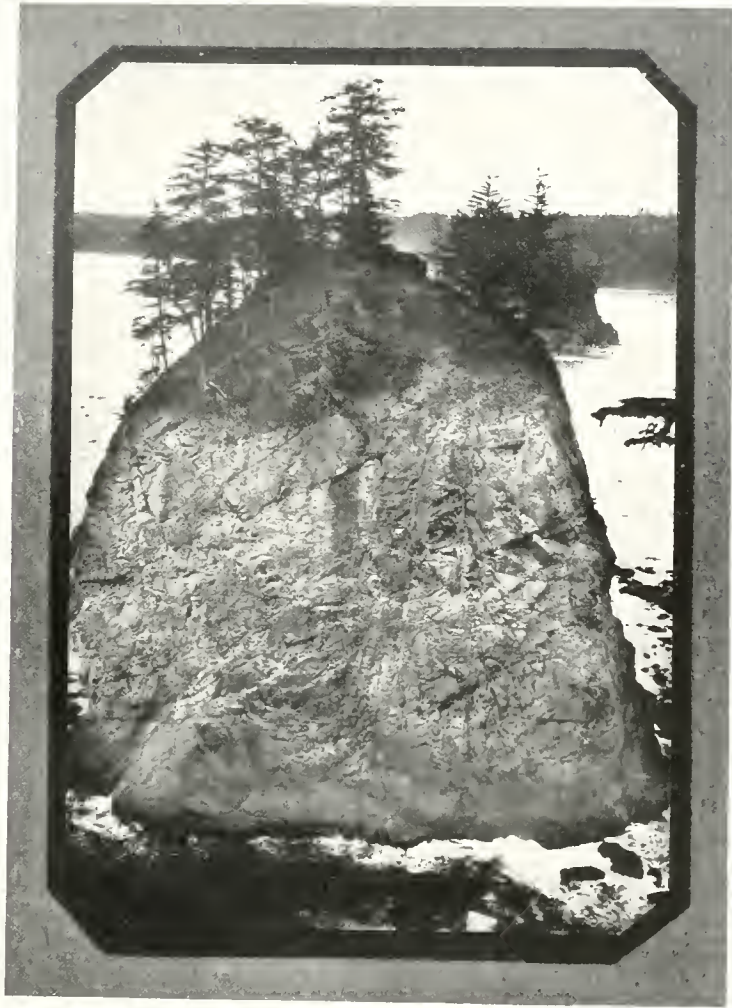
Given speed, courage, and good appetites, all of which these birds

These grim deaths rear their young upon the cliffs of the Olympiades, choosing for the purpose some unlined cranny or ledge midway of an inaccessible precipice. They show great attachment for a given locality, which really, because of their presence, takes on something of the distinction of a baronial estate; and they are valiant in defense of their young. The site shown in the cut has been occupied for years by a pair of *Kahlakaudo*'s, as the Quillayutes call these Falcons, and in 1907 the young were hatched about June First.

On Carroll Islet we found a single full-grown chick, probably the runt of a scattered brood, and judged that he must have broken shell by the first of May. He was in charge of two

undoubtedly possess, it is difficult to conceive of more Eden-like conditions than those here provided for the Peale Falcons. Sea birds of eleven species make Carroll Islet home, and it is in the highway of passage during migrations. The Falcons had only to covet and kill morning, noon and night. Indeed so lavish was the provision made for them, that their presence did not seem to cause concern to the myriad sea-fowl. The Falcon's choice appeared to fall oftenest upon the Cassin Auklets, and most of the tragic feather heaps discovered belonged to this species. Since

the Auklets fly only by night during the breeding season, we were forced to conclude that the Falcons secured their favorite quarry after nightfall or else very early in the morning.



Taken near La Push.

Photo by the Author.

NESTING SITE OF THE PEALE FALCON.

THE NEST APPEARS AS A TINY WHITE SPOT ON THE SHEER WALL, A LITTLE TO THE RIGHT OF THE CENTER.

No. 215.

PIGEON HAWK.

A. O. U. No. 357. *Falco columbarius* Linn.

Description.—*Old male.* Above bluish gray or dark slaty blue; feathers with black shafts and pale or rusty edges; general color usually interrupted by outcropping white or buffy on nape; tip of wing formed by second primary; first shorter than third; first and second sharply notched on the inner web; the second and third slightly emarginate on the outer web; inner webs of all quills barred or spotted with whitish; outer webs with traces of ashy markings; tail darkening posteriorly, white-tipped, and crossed by four narrow, whitish bars, the anterior one concealed; below white or whitish, nearly immaculate on throat, darkening posteriorly to tawny or ochraceous, heavily streaked with dark umber, sometimes changing to bars on the flanks; sides of throat and cheeks finely pencilled with umber; iris brown; bill and claws blue-black; feet yellow; cere and base of bill greenish yellow. This high plumage is quite rare. *Adult female and male in usual dress:* Above dark umber-brown, glaucous or not, the head varied by much buffy or rusty edging, with blackish central streaks; wing-spots ochraceous-buff; tail with pattern as before, but blackening toward tip, and with ochraceous-buff cross-bars; below darker buffy all over, or tawny medially as well as posteriorly; streaking of variable intensity. *Immature:* Perhaps lighter above, and with more ochraceous-buffy edging; otherwise not appreciably, or at least constantly, different from adult. Adult male, length: 10.00-11.50 (254-292.1); wing 7.00 (177.8); tail 4.90 (124.5); bill .48 (12.2). Adult female, length: 12.00-13.00 (304.8-330.2); wing 8.50 (215.9); tail 5.40 (137.2); bill .57 (14.5).

Recognition Marks.—"Little Hawk" size; swift flight; sharp wings; stout proportions otherwise; heavily umber-streaked lower parts, tail crossed by four whitish bars as compared with *F. richardsonii*, darker; lighter and more extensively spotted than *F. c. suckleyi*.

Nesting.—*Nest:* in hollow limbs of trees or in crannies about cliffs. *Eggs:* 4 or 5, creamy-white, spotted and blotched with reddish brown or chocolate, or else cinnamon-brown sprinkled and dotted with heavier shades of the same color. Av. size, 1.62 x 1.22 (41.2 x 30.9). *Season:* c. May 1st; one brood.

General Range.—North America at large, south to the West Indies and northern South America. Breeds chiefly north of the United States.

Range in Washington.—Not common resident and migrant east of the Cascades; rare or casual on the West-side.

Authorities.—? "*Falco Hesalon*," Orn. Com., Journ. Ac. Nat. Sci. Phila., VII., 1837, 193. ? Cooper and Suckley, Rep. Pac. R. R. Surv. XII., pt. II., 1860, p. 142 (possibly *F. c. suckleyi*). ? Lawrence, Auk, Vol. IX., Jan. 1892, p. 43 (Not certainly identified). **Bendire**, Life Hist. N. A. Birds, Vol. I., 1892, p. 301. (T). C&S, Ist, D¹, Sr. D², B. E.

Specimens.—(U. of W.) Prov. B. E.

IF a scrutiny of all little hawks is maintained thruout the year, and with special diligence in winter and early spring, the search will be rewarded now and then by the sight of a bird whose movement is a little more rapid and dashing than that of the ubiquitous Sparrow Hawk. The wings seem to reach forward with a stroke like that of a strong swimmer; and, altogether, there is an air of indefinable quality and power about the diminutive Pigeon Hawk, which does not pertain to his less spirited cousin. Not content with the humble quarry which usually satisfies the commoner species, this little winged terror makes havoc among the Blackbirds, Meadowlarks, and smaller songsters. Himself not larger than a full-sized pigeon, the Hawk sometimes pursues a Mourning Dove with relentless fury, and easily overtakes this fleet bird, unless it finds cover or the protection of man. The audacious creature has even been credited with killing Ptarmigan, and it sometimes attacks sea-fowl of thrice its weight, thru sheer exuberance of spirits.

Now and then, also, one comes upon the Pigeon Hawk seated at rather close quarters; for it is less suspicious than most, and it hails from northern wilds or mountain fastnesses which do not know the fear of man. At such a time one is struck by the quaint, almost antique, appearance of the tawny breast with its heavy amber streaks; and the glaucous bloom of the upperparts might have come from my lady's cheek when she went hawking, centuries ago. In the hand, the round white spots, which sprinkle the feathers lining the bird's wings, make it seem still more like a product of curious mediæval art.

"Altho the well known Pigeon Hawk is pretty generally distributed over the entire United States during the fall and winter seasons, by far the greater number breed north of our border, and comparatively few remain as summer residents, at least east of the Mississippi River, and those that do, generally confine themselves to the mountain districts and to the thinly settled and heavily wooded regions along our Northern States. In the Rocky Mountains, as well as in the Sierra Nevada and Cascade Ranges, and their spurs, the Pigeon Hawk is probably quite a common summer resident, but as yet its nest and eggs have been rarely taken, and even where they have been found, there remains more or less doubt as to their proper identification, as the two closely allied forms, *Falco columbarius suckleyi* and *Falco richardsonii* occur in some of these mountains as well, and are very liable to be mistaken for the true Pigeon Hawk, even by fairly well posted ornithologists, and almost certainly by the average collector." (Bendire.)

No. 216.

BLACK MERLIN.

A. O. U. No. 357 a. *Falco columbarius suckleyi* Ridgw.**Synonyms.**—SUCKLEY'S MERLIN. BLACK PIGEON HAWK.

Description.—*Adults:* Similar to *F. columbarius* but much darker. *Adult male in high plumage:* Above blackish slate, nearly black on hind-neck, definitely black on lesser wing-coverts; pileum and occiput finely streaked with dusky; remaining upper plumage sharply streaked by black shafts of feathers; flight-feathers black on exposed surfaces, the white spotting plainly visible from below but much reduced in extent; tail black above on exposed portion, narrowly tipped with white, below crossed by three obsolescent white bars (appearing only on inner webs), the distal bar nearly two inches from tip to tail; below as in *F. columbarius* but streaks sharper, heavier, and nearly uniform sooty black; tawny wash of sides, thighs, and flanks heavier. *Adult female, and male in more usual plumage:* Above warm brownish black, the blue present as a gloss but much reduced in intensity, white streaks on sides of neck tending to invade nape; spotting of wings more extensive and often tawny-tinged; tail crossed by four subterminal bars, of which two visible from above, white or tinged with tawny; underparts more heavily tinged with tawny and streaks a little more diffuse, heavier and tending to confluence on sides. *Young:* Changes as in *F. columbarius* but always darker. Size as in preceding.

Recognition Marks.—Little hawk size; blackish or slaty above; throat finely pencilled with black; underparts heavily streaked with black (or barred in young).

Nesting.—*Nest:* in holes high in trees. *Eggs:* not yet taken—presumably much like those of preceding form.

General Range.—Pacific coast district from northern California to Sitka, east at least along eastern slopes of Cascades and Blue Mountains in Oregon and Washington.

Range in Washington.—Not common resident on West-side; probably intergrades with *F. columbarius* in Cascade Mountains.

Authorities.—? Baird, Rep. Pac. R. R. Surv. IX. 1858, 9 & 10 (part). *F. suckleyi*, Allen, B. N. O. C. VI. 1881, 128. Rh. Kb. Ra. B. E.

Specimens.—(U. of W.) Prov. E.

BLACK MERLINS are fairly common thruout the country lying between the Cascade Range and the Pacific Ocean. They are most numerous during migrations, but a few pairs remain with us during the summer for the sake of raising a family.

During the fall and early spring they are most often to be met with in the open prairie country, and on the extensive tide flats that are to be found along Puget Sound. In such localities there is always an abundance of the smaller migratory birds, which seem to make up almost the entire sum and substance of their food supply. These, so far as I have seen, are invariably

caught on the wing, sometimes by a direct swoop, and at others by the falcon trick of turning breast upwards. A thrilling illustration of this last named habit came to my notice when half a dozen Tree Swallows were teasing one of these Merlins as he was passing over a large marsh. This passage at arms took place at a considerable height from the ground and formed a most vivid picture. The Swallows carefully kept above the Hawk so that he could not pounce upon them, and occasionally one, bolder than the rest, would dive down and peck him on the back; but the larger bird seemed to pay no attention whatever. Of a sudden—and it was almost as much of a surprise to me as it must have been to the Swallow—the apparently listless Hawk met one of these attacks by turning gracefully breast uppermost. He literally turned a half-somerset in midair, and so accurately was the movement timed that the over-confident Swallow flew directly into the outstretched talons of his enemy.

Occasionally grasshoppers and large dragon-flies are caught and eaten, always when flying, and seemingly more for sport than for the desire for food. In this connection I may express my belief that they often take pleasure in the chase when not intending to kill, for I have seen one repeatedly dash thru a large flock of terrified Sandpipers without apparently attempting to catch any of them.

When not too heavy the prey is taken to the topmost limb of some large tree, where the hawk always turns and faces in the direction from which he came. This last curious trait is undoubtedly due to precaution, but I have always been at a loss to know what it fears. Toward mankind it shows little or no timidity, and I have repeatedly discharged my gun while one of these hawks was hunting within thirty yards of me, without appearing to frighten him in the least.

The flight, like that of all the falcons, is direct and businesslike, and consists of an almost continual flapping of the wings, very seldom sailing for any distance, and never soaring about in circles, as is the habit with all other members of the hawk family, save the falcons.

So far as known no positively identified eggs of the Black Merlin have ever been taken, and only two nests have been reported to me, both of which were in inaccessible cavities high up in decayed trees. One of these that I personally visited in June was placed in a lone cottonwood tree in the valley of the Puyallup River, and contained young that were learning to fly. The young paid no attention whatever to me, but the parents sat overhead looking down at me and uttering plaintive whimperings, altho seemingly pretty well assured that I could not reach them. The note sounded not unlike the *kik-kik-kik* call of the Flicker, only very much more subdued, and is the only sound I have ever known this bird to make at any time.

J. H. BOWLES.

No. 217.

RICHARDSON'S MERLIN.

A. O. U. No. 358. *Falco columbarius richardsonii* (Ridgw.).**Synonyms.**—AMERICAN MERLIN. RICHARDSON'S PIGEON HAWK.

Description.—*Adults* somewhat similar to *F. columbarius* but larger and much lighter in coloration. *Adult male*: Above bluish dusky or brownish slaty gray as to ground but much relieved by feather-skirtings of rusty brown, and by blackish shafts; pileum and hind-neck chiefly rusty brown (nearly Prout's brown) finely streaked with black; wings and tail brownish dusky, the former, both on remiges and covert feathers, crossed by numerous interrupted bars of whitish and tawny, the latter tipped with white and crossed with five prominent white bars; flight-feathers and tertials also tipped with white or grayish; underparts chiefly cream-buff as to ground, but white, immaculate, on throat; jugulum finely pencilled and breast heavily streaked with sepia (each streak with darker shaft-line); sides and flanks still more broadly marked, or else sepia spotted with whitish; flags and posterior underparts sparsely pencilled with sepia or unmarked centrally; lores and a faintly defined superciliary buffy; forehead buffy white sharply streaked with black; sides of head and neck forming transitional area, finely streaked buffy, rusty, sepia, and whitish in varying proportions. *Adult female*: "Differing in coloration from the male only in points of detail. Ground color of the upperparts clear grayish drab, the feathers with conspicuously black shafts; all the feathers with pairs of rather indistinct rounded ochraceous spots, these most conspicuous on the wings and scapulars. Secondaries crossed with three bands of deeper, more reddish, ochraceous. Bands of the tail pure white. In other respects exactly like male" (Ridgway). [A mounted specimen in the Provincial Museum at Victoria, labelled female, differs in no respect whatever from the male unless it be in heavier streaking of the underparts.] *Young birds* are said to be more extensively rusty above, with broader and more reddish tail-bands, and to be unmarked on lower tail-coverts and crissum. Length 12.00-14.00 (304.8-355.6). Measurement of male: wing 7.70 (195.6); tail 5.00 (127); bill .50 (12.7); tarsus 1.30 (33). Female: wing 9.00 (228.6); tail 6.10 (154.9); bill .55 (14); tarsus 1.40 (35.6).

Recognition Marks.—Little hawk size; brownish cast of plumage above; heavy ochraceous spotting of wing (much more extensive than in Pigeon Hawk); tail crossed by six bands (including the terminal band).

Nesting.—*Nest*: in cavity of tree or crevice of cliff; rarely of twigs in tree-top. *Eggs*: 3-5, creamy buff heavily sprinkled, spotted, and blotched with shades of cinnamon. Av. size, 1.60 x 1.24 (40.6 x 31.5). *Season*: May; one brood.

General Range.—Interior of North America chiefly east of the Rockies, less common westerly to the Pacific and from northern Mexico north to the Saskatchewan—range not precisely separable from that of *F. columbarius*, but bird often found where *typicus* is absent.

Range in Washington.—Not common summer resident and migrant east of the Cascades.

Authorities.—*F. richardsoni* Ridgw., Allen, B. N. O. C. VI. 1881, p. 128.

Specimens.—P¹. Prov. C.

BIRDS of rare breed these, and our local knowledge of them is still confined to the meager notes accompanying the taking of specimens by Captain Bendire at Fort Walla Walla, and by Dr. Merrill at Fort Sherman, Idaho. Capt. Bendire concluded that the bird did not breed near Walla Walla, but Dr. Merrill took a specimen at Fort Sherman on the 20th of August; and it is altogether probable that the bird will be found as a rare nester in Washington.

In habit the Richardson Merlin is an exact counterpart of the better-known Pigeon Hawk. In plumage it is much lighter, and appears at a glance to be a mere bleached, or desert type, of the *Falco columbarius* race. Perhaps it is; but the persistence of its *six* tail-bars argues against this theory, and points to a more ancient strain, from which both were derived, and of which the European Merlin with its *eight* tail-bars is a cognate example.

No. 218.

SPARROW HAWK.

A. O. U. No. 360. **Falco sparverius** Linn.

Synonym.—RUSTY-CROWNED FALCON.

Description.—*Adult male:* Top of head slaty blue, with a rufous crown-patch; sides of head and throat white, a black stripe from the lower eye-lid anteriorly, proceeding obliquely downward; a similar transverse bar on the side of the neck, and a dab on either side and sometimes in the middle of the cervix; back, scapulars, and tail rich rusty red; strong black bars in variable quantity across the middle of the back and lower scapulars, or rarely reaching cervix; a heavy subterminal black band on tail, the central feathers tipped with rufous and the others with white; the wing-coverts and inner quills (including secondaries) slaty blue, the former black-spotted and the latter crossed by a heavy black bar; primaries blackish, the point of wing formed by the second; the first sharply emarginate on the inner web, the second slightly so; all the wing-quills heavily spotted with white on the inner webs, these spots confluent in bars on the under surface; below whitish or slightly tinged, immaculate on lower belly, flanks, and crissum; elsewhere (save on throat, as noted above) lightly tinged or heavily shaded with rufous,—the fore breast usually but not always unmarked, the sides and middle belly very lightly or quite heavily spotted with black. Bill bluish black; cere and feet yellow. *Young male:* Similar to adult, but lower scapulars and wing-quills lightly tipped with white; not so heavily shaded with rufous below. *Adult female:* Subsimilar, but wings like the back; the black barring regular and continuous over entire back, wings (except quills), and tail,—the tail having ten to twelve bars, but the subterminal bar often larger; barring indicated narrowly across upper tail-coverts; below not tinged with rufous, but streaked instead with rusty brown; the sides sometimes barred with blackish. *Young female:* "Similar to adult, but colors softer, deeper, and more blended" (Ridgway). *Adult male,*

length: 8.75-10.50 (222.3-266.7); av. of nine specimens: wing 7.24 (183.9); tail 4.63 (117.6); bill .50 (12.7). Adult female, length: 9.00-12.00 (228.6-304.8); av. of eight specimens: wing 7.50 (190.5); tail 5.06 (128.5); bill .52 (13.2).

Recognition Marks.—Robin size, but appearing larger. The black markings about head, and rufous of upperparts distinctive.

Nesting.—*Nest*: in hollow trees, often in deserted Woodpecker holes or in crannies of cliffs. *Eggs*: 4-6, sometimes 7, creamy, buffy, or vinaceous, sprinkled and spotted with deeper shades of the ground color, or darker reddish browns. Av. size, 1.38 x 1.14 (35.1 x 29). *Season*: May-June; one brood.

General Range.—North America east to the Rocky Mountains, and from Great Slave Lake south to northern South America. Also Pacific Coast slope.

Range in Washington.—West-side, probably resident only (see below).

Authorities.—? Baird, Rep. Pac. R. R. Surv. IX., 1858, 14. Not previously published. Joseph Grinnell in *cpist.*, 1906. C&S, L¹(?).

Specimens.—(U. of W.) B. C.

MR. JOSEPH GRINNELL, the well-known ornithologist of Berkeley, pronounces certain Tacoma specimens submitted by Mr. Bowles true *sparverius*. If this surmise be correct it furnishes another example of that "resaturation" of bleached plumage, which we suspect takes place in the case of several desert races invading this region of heavy rainfall. The only wonder is that the Sparrow Hawks of Puget Sound are usually so light-colored, and so out of harmony with their surroundings. It may be that this tendency to darker coloring is confined to those few examples which winter here; but of this we have no proof as yet.

No. 219.

DESERT SPARROW HAWK.

A. O. U. No. 360a. *Falco sparverius phalaena* (Lesson).

Synonyms.—WESTERN SPARROW HAWK. MOUSE HAWK. PRAIRIE HAWK. GRASSHOPPER HAWK.

Description.—Similar to *F. sparverius* but averaging larger with relatively longer tail; paler with more rufous and somewhat more extensive crown-patch; black bars on inner webs of wing-quills not complete; black bars of upperparts in female narrower and those of tail often incomplete.

Recognition Marks.—As in preceding; paler.

Nesting.—*Nest*: in old Flicker hole or natural cavity of tree or in cranny of cliff. *Eggs*: 4-6, creamy buff, heavily or lightly sprinkled, or more rarely blotched, with warm cinnamon. Av. size, 1.35 x 1.13 (34.3 x 28.7). *Season*: May; time according to altitude; one brood.

General Range.—Western United States and British Columbia (except

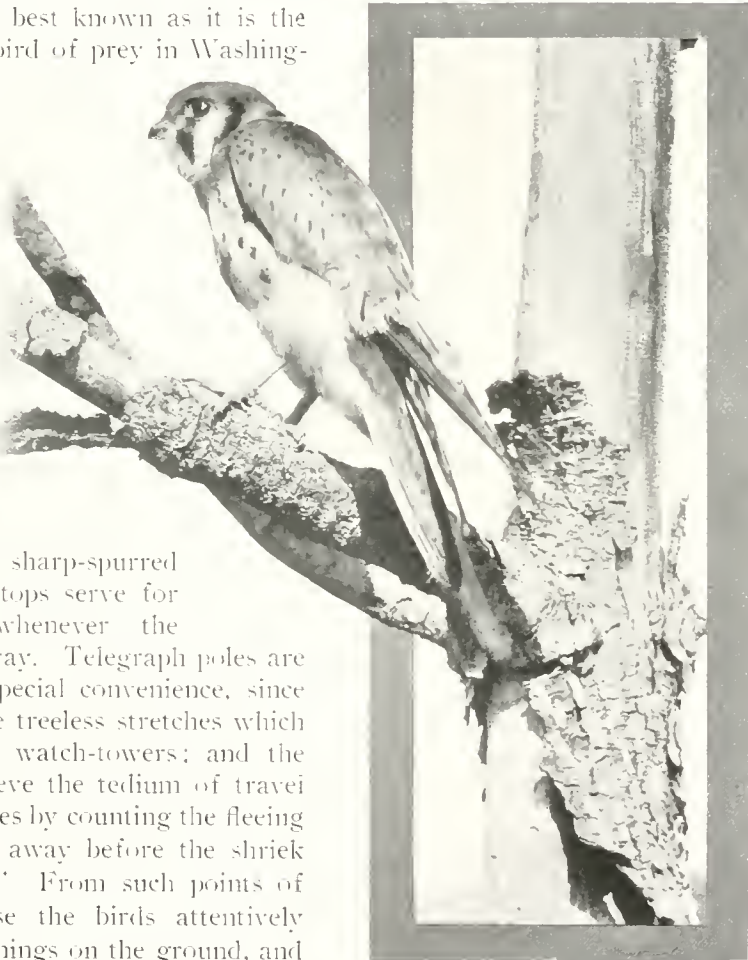
Pacific coast district) chiefly west of the Rocky Mountains, south to northwestern Mexico.

Range in Washington.—Abundant summer resident, and not common resident east of the Cascade Mountains; common in summer west of Cascades, where winter (?) birds are reverting to plumage of *typicus*.

Authorities.—[Lewis and Clark, Hist. Ex. (1814), Ed. Biddle; Coues, Vol. II, p. 185]? *Falco sparverius*, **Brewster**, B. N. O. C. VII, Oct. 1882, p. 227. (T.) D¹, Ra. D², Ss¹, Ss², Kk. J. B. E.

Specimens.—U. of W. P¹, Prov. BN? E?

THIS handsome little Falcon is unquestionably the best known as it is the most abundant bird of prey in Washington. Tho not uncommon in open situations west of the Cascades, it is more perfectly at home in the rocky defiles or upon the artemisia plains of the East-side. Commanding points of rock are worn smooth by the clasp of many sharp-spurred claws; and tree-tops serve for sentry-boxes whenever the birds pass that way. Telegraph poles are regarded as a special convenience, since they traverse the treeless stretches which afford no other watch-towers; and the tourist may relieve the tedium of travel as often as he likes by counting the fleeing Falcons melting away before the shriek of the "limited." From such points of vantage as these the birds attentively watch the happenings on the ground, and dive down whenever they consider that their presence is needed by mouse or



Taken in Oregon. Photo by A. W. Anthony.

DESERT SPARROW HAWK.

grasshopper. The Falcon trusts, so far as his prey is concerned, to his elevated position, and does not hesitate to glance freely from side to side; while the wayfarer is regarded as likely as not with a frank curiosity not unmingled with friendliness.

Much time is spent, also, upon the wing, not circling after the manner of Accipiters and Buteos, but in passing rapidly over the scene, or else flying slowly but directly over such promising areas as grassy meadows and fallow fields. Now and again the bird checks itself suddenly and pauses at a good height to study a suspicious movement in the grass below. It will thus flutter over one spot for a minute at a time, and then pass on disappointed, or else pounce suddenly upon its prey and bear it off to some elevated perch for quiet consumption. When the wind is blowing strongly, the Hawk no longer flutters at its critical stops but only balances upon the wind, so nicely, indeed, that its wings are almost motionless.

Always graceful, the Sparrow Hawk is seen to best advantage during the courting season, when the male reaffirms his fondness for his life-long mate by circling about her as she sits upon the tree-top; or he measures the height of his devotions by ascending to the clouds before her, and dashing himself at her feet again with shrill cries of *Killy, killy, killy*. To hear the snarling clamor of the birds, one would think that they were not getting on nicely; but this is a mistake, for the high-pitched conversation is really very amiable in character, and neither bird would think of parting from its consort, for however brief a space of time, without a screamed farewell of unquestionable tenderness.

Sparrow Hawks nest in holes in trees when these are convenient, using either natural cavities or the deserted tenements of Flickers and Lewis Woodpeckers. The higher these rented quarters the better the birds are satisfied, but holes not over four feet from the ground are of record. In default of such accommodations, old Magpies' nests, or even open-topped Crows' nests have been utilized; but a more common expedient is to resort to the romantic crannies and hidey-holes of the lava cliffs. In such situations this diminutive



Photo by J. W. Anthony.
A GREASEWOOD STATION.

Falcon appears to recall his noble ancestry; and I have fancied that he was here a shade more valiant in defense of his young. Certainly the Red-tail does not care for that particular stretch of cliff; and the Prairie Falcon seems to regard the lesser spit-fire with quaint indulgence, or else to treat him with that magnanimous unconcern which a Newfoundland shows to a terrier.

The eggs, which seldom have any softer resting place than chips and stones, or the rotten wood which the Woodpeckers have left them, are among

the handsomest of oölogical treasures. The line of the shell, still plastic, has been generously sprinkled with cinnamon, and a warm glow imparted to the whole. Incubation lasts three weeks; and the young, when hatched, are covered with a thick, white down, which gives them a rather tidy appearance in spite of their enormous eyes.

The food of the Desert Sparrow Hawk consists largely of insects, of which grasshoppers and beetles are the most noteworthy. Spiders, lizards, mice, shrews, and small snakes are also eaten; and in winter, when other food is unavailable, small birds. The consumption of birds must be largely matter of individual taste. Ordinarily the smaller birds do not fear the Sparrow Hawk, and they will flit about a tree containing this watchful Falcon with perfect unconcern; yet I have seen one seize a Meadow-lark in midsummer, and there really seems to be no reason in nature why he should not help himself. The testimony



*Taken in
Walla Walla
County.*

*Photo by
the Author.*

"RESORT TO THE ROMANTIC CRANNIES OF THE
LAVA CLIFFS."

of experts, however, is overwhelmingly in favor of the Sparrow Hawk. He performs an invaluable service to the farmer, and deserves rigid protection everywhere.

No. 220.

AMERICAN OSPREY.

A. O. U. No. 364. **Pandion haliaetus carolinensis** (Gmel.).

Synonym.—FISH HAWK.

Description.—*Adult male*: Underparts plain fuscous; tip of wing blackish; tail crossed by six or eight dusky bands; head white, heavily but narrowly streaked with blackish; an irregular dusky band proceeding backward from eye; feathers of occiput loosely ruffled, or presenting a crested appearance; underparts white, sometimes rufous-spotted on breast, but usually immaculate; lining of wing mottled,—white and fuscous near edge, remainder white or buffy, dusky-barred distally; bill and claws black; cere and base of bill bluish black; feet bluish gray; iris yellow and red. *Adult female*: Similar but breast heavily marked with yellowish brown or fuscous. *Immature*: Like adult, but feathers of upperparts bordered terminally with white or buffy. The same distinction obtains between the sexes as in case of adults. Length 21.00-25.00 (533.4-635); wing 17.00-20.50 (431.8-520.7); tail 7.00-10.00 (177.8-254); culmen 1.20-1.40 (30.5-35.6).

Recognition Marks.—Brant size; extensive white contrasting with fuscous, distinctive; labored flight; river- and lake-haunting ways.

Nesting.—*Nest*: an immense mass of sticks, broad-topped, lined centrally with bark-strips and soft materials; placed on top of trees of various heights, or on isolated rocks of rivers, etc. *Eggs*: 2-4, dull or buffy white, heavily spotted, blotched, or overspread with chocolate; rarely almost or quite unmarked. Av. size, 2.45 x 1.81 (62.2 x 46). *Season*: May 1-20; one brood.

General Range.—North America from Hudson Bay and Alaska south to the West Indies and northern South America. Breeds thruout its North American range.

Range in Washington.—Summer resident east and west of the Cascades along major streams and near suitable bodies of water. One winter record, American Lake, January 26, 1907.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Cones, Vol. II, p. 180.] *Pandion carolinensis*, Gmelin, **Baird**, Rep. Pac. R. R. Surv. IX, 1858, pp. 44, 45. T. C&S. L. Rh. D. Sr. Ra. Kk. J. B. E.

Specimens.—(U. of W.) P. Prov. B. BN.

WHETHER or not fish is proper brain food depends, as some one has wittily remarked, "more upon the brain than it does upon the fish." An exclusive diet of fish has not made the Fish Hawks either brainy or doughy. We need not be troubled on the latter score tho, for in a family where prowess

and tyranny are almost synonymous, it is a comfort to find birds who mind their own business and exhibit a proper humility. Ospreys are simple-hearted, honest folk, and they deserve protection, if for no better reason, simply because they are inoffensive and picturesque. The fact that these birds require a few dozen salmon for their annual support, has greatly preyed upon the minds of certain men who reckon their own catch by the scow-load; and a cruel persecution has broken out in some quarters, persecution as senseless as it is selfish. No true sportsman, however, will begrudge to this bird his hard-earned catch, taken by a plunge and strike, which is, if anything, rather more sportsman-like than the use of line and lure.

The Osprey preys exclusively upon fish and covers long stretches of water in its tireless search. It flies along at a height of fifty or a hundred feet above the water, and when its finny prey is sighted, pauses for a moment on hovering wings, then drops with a



Taken near Chelan.

Photo by the Author.

"HIGH IN A NEIGHBORING TREE."

resounding splash, often quite disappearing beneath the water, but rising again quickly with a fish firmly secured in its talons. The bird upon rising immediately adjusts the catch, placing it head foremost so that it will offer the least resistance to the air in flight. Not infrequently the Hawk secures a fish which it is barely able to handle, and occasionally it strikes one so large that it

is drawn under and drowned before it can disengage its claws. Clear water is essential to the Osprey's success, for he must needs see and strike from afar. The bird has little use, therefore, for the turbid Snake River, and none at all for the glacial streams which rise about Rainier and Baker. Neither is the Osprey often seen along the west coast, but it enjoys the more quiet waters of Gray's Harbor and Puget Sound, and it is found thruout the length of the Columbia River and upon its larger tributaries. It is not a regular winter resident, having apparently acquired the migrating habit in countries where ice interferes with winter fishing; but it returns to its haunts as early as the first week in



Taken near Uletan

Photo by the Author

OSPREY'S EGGS IN SITU

NOTE THE MISCELLANEOUS CHARACTER OF THE MATERIALS WHICH COMPRISE THE NEST, OF WHICH ONLY THE CENTRAL PORTION IS SHOWN.

April, and we have one record of its occurrence, at American Lake, near Tacoma, on the 26th day of January.

The Osprey's nest, a huge aggregation of sticks and trash, is placed, normally, near the water's edge upon the cliffs, or upon rocks projecting in mid-stream, or else high in a neighboring tree. Persecution, however, will drive it to the deep woods miles from its fishing grounds. A typical nest

found on the banks of the Columbia River, near Pateros, is placed twenty-five feet high in a stout pine tree. It is flat on top, three feet across, but seven feet in depth, the mass representing the successive accumulation of many years, perhaps of generations. Within a little depression in the center, surrounded by soft materials, lie three handsome eggs, rich chocolate on a tinted ground. The female is on, while her mate, tired of fishing, is standing by her side. Both rise at our approach and poise in midair above our heads, uttering feeble screams of protest, *ki-ik, ki-ik, ki-ik*, as they suspect our oölogical purpose. A pair of Magpies have made their nest within the hospitable sides of this ancient pile, and these self-appointed camp followers add their voices to the general din.

Another Osprey's nest, held aloft by a pine tree on the north shore of Lake Chelan, houses a pair of Western Kingbirds as well. The reason for this coöperative housekeeping is not far to seek after one visits the nest. The presence of half-eaten fish, often lying beside the satisfied bird, attracts innumerable flies. Now flies are the Kingbird's specialty, and we may readily believe that the Hawks appreciate the zealous services of their tenants.

Eggs (I hesitate to tell you that they are among the handsomest known) are deposited in May, and incubation lasts between three and four weeks. Unlike the Eagle, the Osprey, if robbed, will make another attempt the same season, but lays usually not more than two eggs the second time. In revisiting the Columbia River nest, mentioned above, on the 10th day of June, I saw the male bird approach the nest quite ostentatiously and deposit a long stick. Whether this was meant as a ruse to discourage investigation on the part of the bird-man, or whether he really considered repairs necessary at this time, I cannot say. The two eggs which the nest contained were not disturbed.

No. 221.

CALIFORNIA CONDOR.

A. O. U. No. 324. *Gymnogyps californianus* (Shaw).

Synonym.—CALIFORNIA VULTURE.

Description.—*Adults*: Dull black, the feathers browner on edges and tips, the greater wing-coverts and the secondaries becoming gray on outer webs, the former tipped and the latter edged with clear white; axillars and under wing-coverts white; the primaries and tail-feathers deeper black; the naked skin of head and neck pale orange or orange-red in life; bill yellowish reddening on cere. *Young birds* lack the white markings and have more decided brown edging to the feathers; the neck is more or less covered with sooty down and the bill and naked skin of head are dusky. *Nestlings* are covered with whitish down and the naked skin of head and neck is dull yellow. Length of adult: 4 to 4½ feet (1219.2-1371.6); extent 9-11 feet (2743-2794); weight 20 to 25 pounds; wing

30.00-36.00 (702-914.4); tail 15.0-18.00 (381-457.2); bill 4.50 (38.1); tarsus 4.50-5.00 (114.3-127).

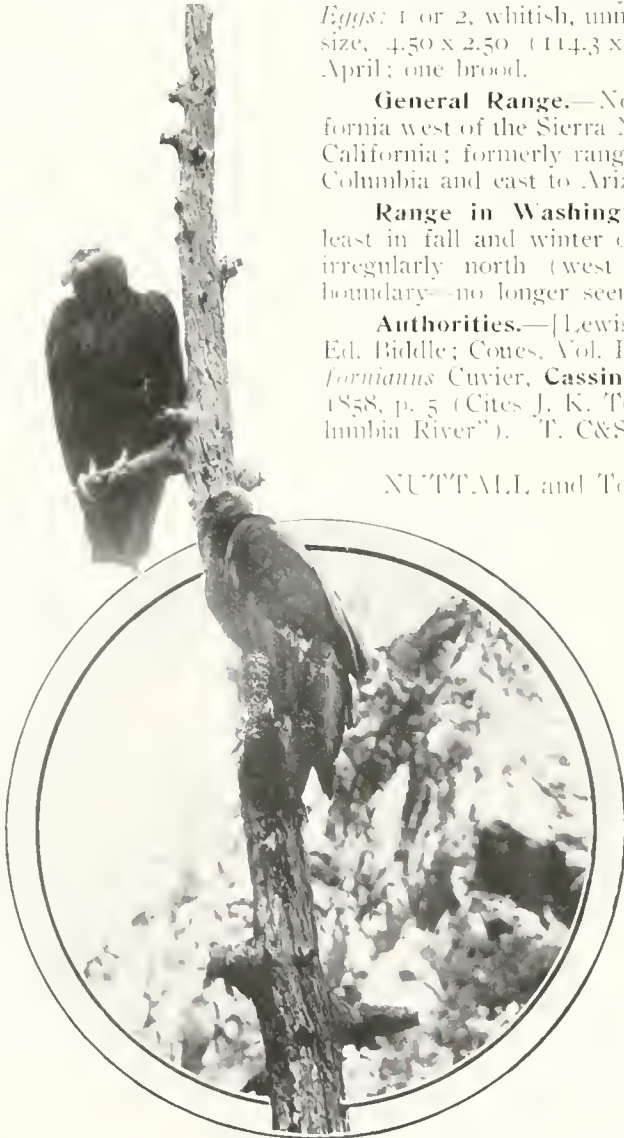
Recognition Marks.—Giant size; unmistakable.

Nesting.—Does not breed in Washington. *Nest:* on ledge or in cranny of inaccessible cliff, formerly also in hollow tree or log. *Eggs:* 1 or 2, whitish, unmarked, elongate ovate. *Av. size,* 4.50 x 2.50 (114.3 x 63.5). *Season:* March or April; one brood.

General Range.—Now chiefly confined to California west of the Sierra Nevadas and northern Lower California; formerly ranged north to southern British Columbia and east to Arizona and Utah.

Range in Washington.—Formerly common at least in fall and winter on the Lower Columbia and irregularly north (west of Cascades) to northern boundary—no longer seen.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Cones, Vol. II, p. 183 f.] *Cathartes californianus* Cuvier, **Cassin**, Rep. Pac. R. R. Surv. IX, 1858, p. 5 (Cites J. K. Townsend "Mouth of the Columbia River"). T. C&S.



CALIFORNIA CONDORS.

Taken in California.

Photo by H. T. Bohlman and W. L. Finley

NUTTALL and Townsend, the pioneer naturalists of undivided "Oregon," regarded this Condor as a summer resident of the Territory, but noted particularly its presence upon the Columbia River during the fall salmon run. Here, in common with Turkey Vultures, Crows, and Ravens, they feasted for a couple of months on the decayed fish, which lined the banks of the stream. Dr. Cooper saw none of them, save probably once at Vancouver in January, 1854, but it was still common report in his day that the birds frequented the scenes of the fall

fishery. Fannin saw two at Burrard Inlet in September, 1880, and this remains the latest recorded occurrence in the Northwest.

On the whole it appears improbable that the California Condor was ever resident in Washington, certainly not within the memory of the white man; and its northern appearances are to be regarded solely as the fishing excursions of a Southerner.

In California these great Vultures were once common, and one observer, a Dr. Canfield, of Monterey, claims to have seen as many as one hundred and fifty at a time. But their numbers have been greatly reduced thru the agency of poisoned carcasses, put out by stockmen and ranchers to protect their flocks and herds from bears and wolves. They are still to be found in limited numbers in the coast ranges and high Sierras of southern California, where they are exceedingly wary save in the vicinity of their nests.

The flight of the Condor is described as being the perfection of ease, for without apparent effort it soars upward until it becomes a mere speck in the sky. In this way it is able to command an immense territory, and on the occasion of a kill by a hunter appears to come from the invisible blue in an incredibly short space of time.

Being of more robust build than the Turkey Vultures, Condors are able to rend fresh carcasses. Companies of them have been known to despatch a slain deer in an hour and a grizzly in two. But they do not object to steaks *à la Française* if they happen not to arrive till some days later. A feast is not forsaken while the table lasts, and individuals too full to navigate have been captured with the lasso.

The Condor lays its single egg early in March upon the floor of a cave or rocky recess of some unfrequented cañon, and the successful rearing of the young requires five or six months. Messrs. Finley and Bohlman successfully exploited a Condor's nest in southern California in the spring and summer of 1906, and the series of photographs secured by them is not only unique for the species, but remains a model for this sort of work.

No. 222.

TURKEY VULTURE.

A. O. U. No. 325. *Cathartes aura septentrionalis* (Wied.).

Synonym.—TURKEY BUZZARD.

Description.—*Adult*: Head and neck all around naked, livid crimson; above lustrous black with purple and violet reflections, varied by grayish brown edgings of feathers; plumage changing below to more uniform sooty brown, lustrous only

on breast; wing-quills and rectrices light dusky below, with whitish shafts; primaries deeply emarginate, the tips considerably separated in flight, very flexible; iris brownish gray; bill dull white; cere bright red. *Young*: Similar, but dusky on head and neck, with downy grayish brown feathers; bill blackish. *Nestlings*: Covered with heavy white down, but head naked,—light bluish black. Length 27.00-32.00 (685.8-812.8); extent about six feet; wing 22.00 (558.8); tail 11.50 (292.1); bill including cere 2.20 (55.9).

Recognition Marks.—Eagle size or less; naked red head; black plumage nearly uniform; soaring flight.

Nesting.—*Nest*: in hollow trees, stumps or fallen logs, or in crannies of cliffs; unlined. *Eggs*: 2, rarely 3, elliptical-ovate, dull white, greenish or buffy white, spotted and blotched irregularly with rich dark brown. Av. size, 2.80 x 1.95 (71.1 x 49.5). *Season*: c. May 10-June 1; one brood.

General Range.—Temperate North America from New Jersey, Ohio Valley, Saskatchewan region and British Columbia southward to Patagonia and the Falkland Islands. Casual in New England.

Range in Washington.—Common summer resident and migrant east of the Cascades; much less common but regular at lower altitudes west of the Mountains.

Migrations.—*Spring*: c. Apr. 15; Tacoma, Apr. 11, 1906. *Fall*: c. Oct. 30.

Authorities.—*Cathartes aura* (Linn.) **Cassin**, Rep. Pac. R. R. Surv. IX, 1858, 4. T. C&S. Rh. D¹, Ra. D², Ss¹, Ss², B. E.

Specimens.—Prov. C. E.

THE crowning touch of a summer day is afforded by the sight of a small company of Turkey Vultures lazily drifting across the middle distance soaring, shifting, wheeling, weaving endless circles, in restful monotony of mid-summer content. It is altogether the witchery of wings which provokes our admiration; but when we pause to think upon it, we bless the wisdom of the Creator in enabling these dusky scavengers to maintain a graceful aloofness. As a decorative feature in a landscape the Vulture possesses unqualified value. As a subject of nearer inquiry he becomes repulsive in the extreme.

But before we treat of the less pleasant things, let us note more carefully that majestic flight. If caught upon the ground the Vulture pitches forward, gives an awkward flap or two to clear his footing, rises sharply, almost immediately catching the air in his ample wings, and begins to sail. Henceforth, with motionless pinions he tilts and turns and sweeps about in stately curves, or glides swiftly off at will in any direction. How *does* he do it! It is easy to see how a bird, moving with the wind and falling sharply, may wheel and breast the wind more sharply still, using his acquired momentum to gain a greater height than the one originally occupied. In this the momentum is like the pull of the string which enables the kite to shoot rapidly upward thru the air. But what shall we say of a bird, which, without momentum, but still on motionless wing, rises steadily *against* the wind? Not only rises, but makes rapid progress forward, as well, in a direction contrary to the wind.

That these and other birds do accomplish this feat is a fact patent to all careful observers. How they do it—well, that is another matter. "The way of an Eagle (Vulture) in the air" has puzzled more than wise Agur.

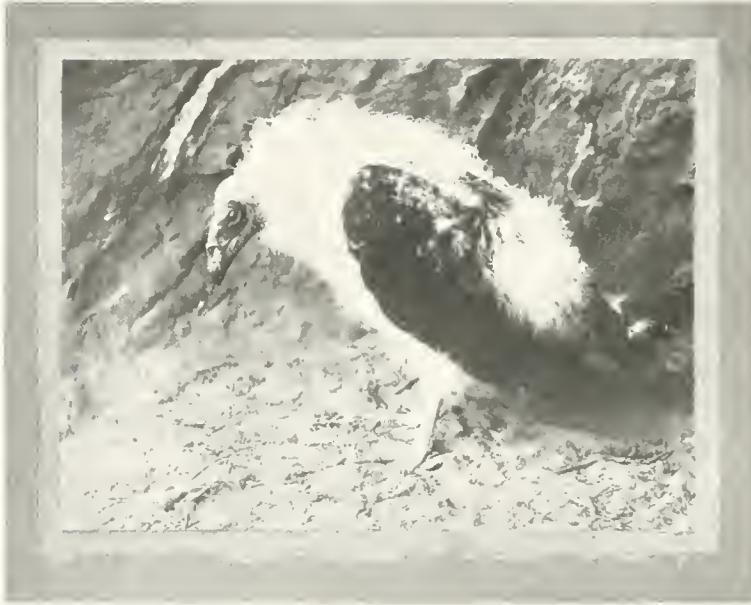
The American Vulture is not a high-flyer like those of the Orient. In his case, however, it is still clearly evident that entire dependence is placed upon the eyesight in the detection of food. An immense extent of territory is covered by a Buzzard on his daily rounds. No visible corruption escapes his notice, but the odor of half-covered carrion may become almost palpable before it attracts his attention. A possible reason for this inability to locate carrion by the sense of smell alone is disclosed in the words of Coues: "Certain it is that independent of the passing contents of the alimentary canal, permanent foetid odors exhale from the bones and muscles; and the same stench is entangled in the web of the feathers. It is retained for a long while even after the bird is killed and stuffed. So strong is it that one author, an excellent naturalist, too, fancied it must be rather unpleasant to the birds themselves." Since the birds, therefore, reek with filth themselves, they are not in a position to exercise discrimination with reference to external scents. It does not seem to be true, as has sometimes been asserted, that the birds really prefer decayed flesh. It is rather a matter of necessity for them, inasmuch as they are unable, except in rare instances, to rend a carcass sufficiently before an advanced stage of decomposition has set in.

Turkey Vultures are much more common east of the Mountains than upon Puget Sound. This is doubtless due to the more open character of the country, as well as to the development of the cattle and sheep business. Almost exclusive attention is paid to the carcasses of the larger animals, since few of the smaller animals die of themselves except when poisoned. On the prairies of Pierce and Thurston Counties Mr. Bowles has seen them supplement their scanty fare by a diet of grasshoppers. In late summer and in autumn they appear to increase in numbers in Whatcom County and in the Fraser River delta, where they gorge themselves, in common with the gulls and crows, upon decayed salmon and cannery waste.

Vultures nest in trees, in crannies of cliffs, or upon the ground, according to the nature of the country in which they find themselves. Upon the East-side they appear to find abundant shelter among the frequent outcroppings of Columbia lava. In Yakima County, early in May, I took a set of eggs on the point of hatching, from a cave in a basaltic escarpment which overlooks the Natchez River. The fissure runs into the cliff about twelve feet, but the eggs were only seven feet in. The odor of the place was overpowering, and I did not stop to investigate the origin of a certain metallic clink which later reflection suggested might have come from a piece of hoop-iron in the accumulated waste on the floor of the cave. Returning several years later to satisfy myself upon this point, I clambered up to the entrance of the cave and clung to the

rocks on hands and knees while peering in thru the semi-darkness. The sardonic eye of a rattlesnake, coldly glittering at two feet, was all I saw. In the next fifth of that same second I seemed to hear a voice from the foot of the cliff calling, "Willece, Mamma wants you!" Thoughtlessly I forsook the quest.

In western Washington the Vultures appear to nest chiefly upon the ground. No



Taken in California.

Placed by Forney and Rollman

YOUNG TURKEY VULTURE

nest is made, but the protection of a bush - clump or log is sought. Two eggs are laid, dull white, or light cream-colored as to ground, with much handsome blotching of chocolate, the first laid usually having the lion's share of the pigment and the second sometimes none at

all. The young are clad in white down, with which their beady eyes and jet black bills contrast strikingly. They are demure little fellows, and appear to deserve a better fate. They are fed by regurgitation; what, were better not specified. A Vulture's eyrie is a shameful place at best, and at its worst, when the season is advanced, it is awful.

The parent birds are very solicitous for their young, but are not brave enough to come to blows. If caught upon the nest the female will hiss defiantly. Besides this, the birds have only one note, a low, guttural croak—of alarm, rather than warning. If closely beset the bird is said to eject the contents of its crop—an effectual defense, in very sooth!

No. 223.

BAND-TAILED PIGEON.

A. O. U. No. 312. *Columba fasciata* Say.**Synonyms.**—WILD PIGEON. "PASSENGER PIGEON" (as frequently misidentified).**Description.**—*Adult male*: Head and neck all around and underparts, change on abdomen, dull wine-purplish, darkest on crown and chest, lightening, more bluish, on chin and upper throat; a sharp, narrow cervical collar of white; behind this is a crescentic patch of rounded feathers in scale-like arrangement, iridescent, with brassy and bronze-green reflections; back, scapulars, and tertials lustrous purplish-slate; rump, upper tail-coverts, wing-coverts, lining of wings, sides and flanks ashy blue; crissum and under tail-coverts white; flight-feathers dusky; tail ashy blue basally, ashy brown terminally and crossed by a broad subterminal band of dusky. Bill yellow, tipped with black; legs and feet yellow with black nails; a prominent red eye-ring. *Adult female*: Like male but paler; head and neck purplish; ashy brown below; cervical collar and metallic crescent subdued or wanting. Length about 16.00 (40.4); wing 8.40 (21.3); tail 5.90 (14.9); bill .75 (19.1); tarsus 1.00 (25.4).**Recognition Marks.**—Little hawk size; a little larger than a domestic pigeon and appearing much like one; tail feathers rounded; cooing notes; and noisy flapping flight.**Nesting.**—*Nest*: a rude platform of sticks placed at various heights in trees, usually close to stem of fir sapling, or, not infrequently, none, the bird placing egg on ground or shifting it at convenience. *Eggs*: usually 1, sometimes 2, pure white, elliptical ovate in shape. Av. size, 1.52 x 1.18 (38.6 x 30). *Season*: May to July locally; in southern portion of range the birds lay thru the year; two or more broods.**General Range.**—Western United States from Rocky Mountains to the Pacific; north to western British Columbia; south to Mexico and the highlands of Guatemala; of irregular distribution southerly, chiefly in wooded mountainous districts, northerly chiefly in secluded valleys.**Range in Washington.**—Not common summer resident and migrant west of the Cascades; of local distribution, occurring chiefly in small colonies in heavy coastal timber or in sequestered valleys—rapidly diminishing in numbers.**Authorities.**—Baird, Rep. Pac. R. R. Surv. IX, 1858, p. 598. T. C&S. L. Rh. Kb. Ra. Kk. B. E.**Specimens.**—(U. of W.) P. Prov. B. E.

TO ANY but thin-blooded vegetarians the sight of a flock of "Wild Pigeons," clustered about the trucks and halyards of a gaunt cedar, is a sufficient excuse for appetite. The birds have gorged themselves, during the early morning hours, upon berries and young acorns, and have retired to these placid heights to ruminate and fatten. Whatever may be the attractions of nursery or larder, the Band-tailed Pigeon is never so thoroly at home as in

the barren summits of his chosen tower; and here, by the exercise of sharp eyesight and sharper hearing, he may feel a measure of security from the prowling gunner. It has come to such a pass, however, that the shot-gun is being abandoned for the rifle, and the older birds are all too familiar with the whistle of the "22 long."



"RETIRED--TO RUMINATE AND FATTEN."

In the presumed absence of enemies, these Pigeons indulge in loud cooing, not unlike that of the domestic variety. In the presence of danger they sit very quiet, and are so successful in escaping attention, that often the first notice one has of their whereabouts is the loud flapping of wings in hurried departure. So noisy are they in flight, that a hunter, coming unexpectedly upon a feeding company in the woods, is likely to be disconcerted by his overwhelming luck and miss fire altogether.

The Band-tailed Pigeon is fairly comparable in point of size and savoriness with the famed Passenger Pigeon, and acorn-fed birds are declared to be especially toothsome. In point of numbers, however, in spite of some extravagant statements on the part of the older explorers, they were never comparable to

the migrating hosts of the East. Suckley once saw a thousand birds in a flock, and said that larger flocks were reported from the settled portions of the Cowlitz. Flocks of half that size may still be seen occasionally in the fall, but companies of a dozen or twenty individuals are more nearly the rule, and these are very much less common than formerly, save in the less frequented districts of the Olympic foothills and along the West Coast.

The typical diet of the Wild Pigeon is acorns, and the birds used formerly to be abundant on the oak-bordered prairies of Steilacoom, and on the southeast corner of Vancouver Island; but our northwestern oak (*Quercus garryana*) is not prodigal of acorns, having its hands full fighting parasites, so that the main dependence of Pigeons hereabouts has always been berries and vetches, with the lesser ground forage. Wild cherries, salmon berries (*Rubus spectabilis*), and red elder-berries (*Sambucus callicarpa*) are favorite numbers, while huckleberries, blackberries, and raspberries are not omitted. In Whatcom County I have found them feeding heavily upon the sweetish berries of the Cascara sagrada (*Rhamnus purshiana*). They have also a great fondness for mineral earths, and resort to the salt-impregnated edges of tide flats, like Londoners to Bath.

The summer season of this species becomes shorter as one proceeds northward. In southern Arizona the bird is resident and nests at any season, raising, no doubt, several broods in the course of a year. At the latitude of the Columbia River, Pigeons appear from the South in April, and linger until October or even November; while at Blaine the birds do not appear before May 5th, nor are they found after the middle of September. Hence, it is evident that in southern Washington they may raise two broods, but further north only one.

Pigeons have no taste for architecture, and the nesting season appears to overtake them, as it were, unawares. They still maintain a loose colonial arrangement, and assemble at favorite feeding resorts thruout the nesting season, but nests are seldom placed so near as adjoining trees. The eggs, sometimes two in number, but usually only one, are often laid upon the bare ground of an oak grove, hop-field, or clearing, without pretense of nest. Usually, however, the nest consists of a handful of sticks, laid crosswise in the semblance of a platform; and this is placed in a fir sapling at a height of ten or twenty feet, resting against the stem of the tree or upon a horizontal branch. But there are no hard and fast rules to be laid down. Professor O. B. Johnson, in the Willamette Valley, Oregon, found a nest "of leaves and moss beside a tree, placed on the ground between two roots; another one upon an old stump that had been split and broken about eight feet from the ground; another was in the top of a fir (*Abies grandis*), and was built of twigs laid upon the dense flat limb of the tree, about one hundred and eighty feet from the ground."

Stranger tales come from the Huachuca Mountains in Arizona. Mr. Otho C. Poling found^a that the female, when disturbed, was able to remove the egg from the nest, and to transport it safely by holding it between the legs and imbedded in the feathers of the abdomen. On several occasions he shot birds thus accompanied by eggs, externally carried, and believed that in

a. Bendire: Life Hist. N. A. Birds, Vol. 1., p. 124 ff.

some cases at least, incubation was performed by the bird seated casually on horizontal limbs without resort to nesting. Thereto partially agrees the testimony of a rancher in Whatcom County, who tells me that he once shot a Pigeon which was sitting in a maple tree in front of his house. The bird fell tumbling and struggling and struck on its back; and when he went to pick it

up he found an unbroken egg beside it, an egg which bore no sign of having been recently extruded.

Incubation, according to Captain Bendire, lasts from eighteen to twenty days and both parents assist. The young grow rapidly, and leave the nest at the end of a month.

While it may be freely admitted that the Band-tailed Pigeon is a fair game bird, and affords excellent eating in the fall, it is high time to call a halt upon its indiscriminate slaughter. The species is not hardy nor prolific, and at the present rate of consumption it will soon be as rare as the Passenger Pigeon of the East. Let us not



BAND-TAILED PIGEON.

wait for clumsy and tardy laws upon the subject, but let common sense prevail over individual selfishness. Instead of feasting on Pigeon pot-pie weekly, or until it becomes a commonplace, let the hunters of the few favored localities which remain content themselves with a half-day's shooting, a mess of ten or a dozen birds each season. And remember, if you please, that the rest of us like Pigeon, too.

No. 224.

MOURNING DOVE.

A. O. U. No. 316. *Zenaidura macroura carolinensis* (Linn.).

Synonyms.—WILD DOVE. TURTLE DOVE. CAROLINA DOVE.

Description.—*Adult male*: General color of upperparts olive-gray or drab, with glaucous bloom and changeable metallic reflections on hind-neck and anterior marginal areas of wings; with bright purplish red iridescence on the sides of the neck; the lower scapulars and inner quills broadly but sparingly black-spotted; hind head bluish slate; remainder of head light drab with a vinaceous

tinge, paling on throat; a blue-black spot below the ear; tail graduated, central feathers like back; the remainder slaty at base, blackening distally, then abruptly white for terminal inch; foreparts below deep vinaceous, fading into cream-buff on lower belly and crissum; axillars and under wing-coverts light bluish gray; bill black; bare space about eye light blue; feet lake red. *Adult female*: Similar to male, but bluish of hind head and neck restricted or wanting; less iridescence; underparts and forehead light drab tinged with vinaceous on breast. *Immature*: Like adult female but duller, without iridescence; black spot below ear wanting; feathers of foreparts above and below tipped with whitish. Length about 12.00 (30.48); wing 5.75-6.00 (146.1-152.4); tail 5.75-6.50 (146.1-165.1); bill .57 (14.5).

Recognition Marks.—Robin size; sober, blended colors; rapid, graceful flight, accompanied by whistling sound of wings; mournful, "cooing" notes.

Nesting.—*Nest*: a frail platform of twigs or straw at moderate heights in trees or on stumps, rocks, etc.; sometimes on the ground. *Eggs*: 2, white. Av. size, 1.08 x .82 (27.4 x 20.8). *Season*: April-August or even September; monthly broods or three or four in a season.

General Range.—Temperate North America, from southern Maine, southern Canada and British Columbia, south to Panama and the West Indies, breeding thruout its North American range.

Range in Washington.—Common summer resident in Upper Sonoran and Transition life-zones east of the Cascade Mountains, diminishing in abundance northerly; rare or casual only west of the Mountains.

Migrations.—*Spring*: Apr. 17, 1900, Yakima Co.; Apr. 22, 1896, Chelan.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Coues, Vol. II, p. 185.] *Zenaidura carolinensis*, Bonap. **Baird**, Rep. Pac. R. R. Surv. 1858, p. 605. T. C&S. D¹. Sr. Ra. D². Ss¹. Ss². J. B. E.

Specimens.—U. of W. P. Prov. B. E.

THE Mourning Dove is not at all the doleful creature which its name would indicate, altho its voice is, in sooth, the appointed instrument of melancholy. Melancholy is not exactly the word either—there is in the Dove's note nothing of sadness unless you yourself are sad. It is rather tender and solemn, the expression of a true-hearted lover whose thought is not alone of passion, but of exalted privilege and well-weighed responsibility—youth that dares all, but not recklessly.

The familiar, long-drawn "mourning" notes are uttered only by the male, and for all their tenderness they have a penetrating quality, which makes them one of the most insistent elements in the chorus of springtime. Besides these the birds make no other sound, unless we count a musical wing-note which is made when suddenly taking flight, and which is so distinct that one can never be quite satisfied that it is not a vocal outcry. The same note, moderated, is heard in mid-flight, and also with renewed force when the birds are checking their flight or alighting; and it is so exactly timed with the wing movement that we must conclude its external origin.

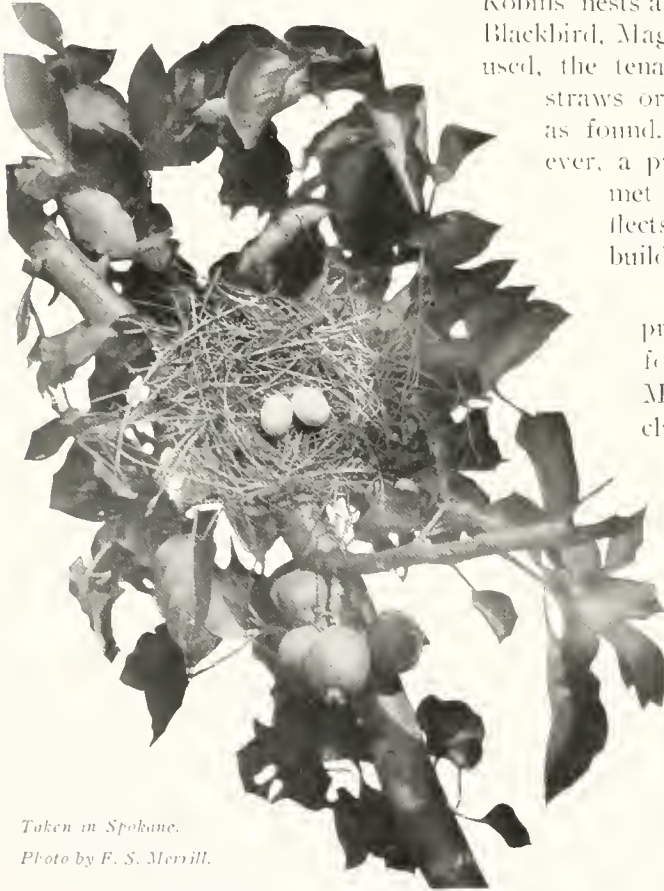
The Wild Doves are model lovers and are chiefly known for their domesticity. During the mating season they sometimes vary the monotony of the ordinary whistling flight by sailing about in graceful curves on stiffened, noiseless wings. There is always an abundance of billing and cooing; and love-making, it is to be feared, often interferes somewhat with the practical side of house-keeping. At least the young wife is not a good house-builder, altho she may be, and doubtless is, a kind mother.

A Dove's nest is the symbol of frailty. A few careless sticks or straws are laid together in a platform, and lodged at a moderate height in the crotch or upon the horizontal limb of a tree or bush. Fence-corners, the tops of stumps, brush piles, and overgrown stone heaps, are favorite places, and occasionally eggs are laid upon the ground with little pretense of a nest or none. I have found several nests in low bushes entirely surrounded by water. Old

Robins' nests and those of the Brewer's Blackbird, Magpie, and others, are also used, the tenant adding a few clean straws or twigs to the structure as found. Now and then, however, a pretty substantial nest is met with, and one which reflects credit upon the gentle builder.

The Doves are very prolific. Eggs may be found at any time from May to September inclusive. Incubation lasts

two weeks, and since the young are of rapid growth, three and even four broods are raised in a season. An observer in southern Ohio, Dr. Howard Jones, declares that he has seen Doves sitting on fresh eggs every month of the year except December and January. According to the



Taken in Spokane.

Photo by F. S. Merrill.

NEST AND EGGS OF MOURNING DOVE.

same writer, the female sometimes lays again before the young have flown, in which case they must assist, perforce, in the duties of incubation.

The young are delicate creatures, in spite of the fact that they get as fat as oysters before they leave the nest. They are fed by regurgitation and their food is mingled with a whitish fluid from the adult stomach—"Pigeons' milk." "At night," according to Langille, "the old one sits crosswise on them even when they are quite large, the nest and birds together thus making quite a grotesque pile."

When frightened from the nest the female drops instantly to the ground, and goes off into a series of elaborate convulsions in an effort to distract attention from her treasures. From the fact that this trait of decoying is oftenest exhibited by ground-nesting species, it is fair to guess that the Mourning Dove was originally and exclusively, as now occasionally, a ground-nester. The male, also, is pretty sure to be close at hand, if, indeed, he was not taking his turn upon the eggs; and when the young are ready to leave the nest he takes charge of them, while his mate is incubating another pair.

In late summer and early autumn the Doves gather into groups or small flocks, altho they cannot be characterized as "highly gregarious," and they feed upon fallen grain and acorns, with wild berries, and also, to some extent, upon insects. In our State they do not deeply penetrate the timber, preferring to spend their time rather in the open fields, or else resorting to some corral or feeding lot to share what the cattle waste. At night they roost chiefly upon the ground, and if the wind is stirring they seek the shelter of some unused irrigating ditch.

The Mourning Dove should by no means be regarded as a game bird. It is true that its flight is rapid and that it becomes very wild under persecution, but it is by nature a confiding species, venturing with its family into our orchards and shade trees, where unmolested. Its unquestioned gift of song ought in itself to be considered ample ground for full protection.

No. 225.

WHITE-WINGED DOVE.

A. O. U. No. 319. *Melopelia asiatica* (Linn.).

Synonyms.—SINGING DOVE. *Paloma cantator*.

Description.—*Adult male*: Above grayish brown, becoming grayer on wing and bluer (plumbeous) on rump; tail except central pair of feathers plumbeous slaty with terminal fourth white; wings with a large transverse patch of white on the principal coverts, the primaries blackening; head, neck, and breast light brownish gray tinged with vinaceous; sides of neck glancing golden-green chang-

ing to purple; a dab of blue-black above auriculars; remaining underparts light pearl-gray, whitening on crissum. *Adult female*: Similar to male but duller, without metallic reflections, vinaceous on chest, etc. Length: 11.00-12.00 (279.4-304.8); wing 6.65 (168.9); tail 5.00 (127); bill .85 (21.6); tarsus .87 (22.1).

Recognition Marks.—Robin size; white wing-patch distinctive.

Nesting.—Does not breed in Washington. *Nest*: of sticks placed low in mesquite or other shrubbery. *Eggs*: 2, white. Av. size, 1.17 x .88 (29.7 x 22.4).

General Range.—The southern portion of the Southwestern States, sometimes north to Colorado (Coles); south to Costa Rica; Cuba; Jamaica; Florida.

Range in Washington.—Accidental—a wanderer from the South.

Authorities.—*Meleopelia leucoptera*, **Bowles**, Auk, Vol. XXV, Jan. 1908, p. 82.

Specimens.—13.

ON the 7th of November, 1907, while Quail-shooting in the Puyallup Valley, near Tacoma, Mr. Bowles brought to bag by a long shot an adult female of this species, which his dog had flushed. The bird was in perfect feather and its manifest vigor would suggest that it was an accidental wanderer, rather than an escaped cage-bird.

The normal range of this species is along the southern border of the western United States, thence southward into Mexico, where the natives call it *Paloma cantator*, the singing dove.

"So closely is it associated with the mesquite country that even its monotonous *whoo-hoo-hoo-hoo* calls up pictures of desert thorn-brush and dove walls, over which the large handsome bird is flying with white bands outspread on wings and tail. Its note is an exaggerated form of the *coo* common to the family. To make it the dove puffs out its throat like a pouter pigeon, emitting the curious hollow sound which is more suggestive of the hooting of an owl than the languid cooing of a dove" (Vernon Bailey).

No. 226.

BOB-WHITE.

A. O. U. No. 280. *Colinus virginianus* (Linn.).

Synonym.—AMERICAN QUAIL.

Description.—*Adult male*: Above general color vinaceous-rufous, changing to cinnamon-rufous on wings and on sides, clearest on upper back and sides of breast, heavily black-spotted or barred on lower back, scapulars, and inner quills, heavily margined with buff on inner edges of inner scapulars and quills, changing to black on forehead, everywhere mottled finely with black, white, or whitish, and bluish gray; tertials in closed wing completely covering the fuscous primaries and secondaries; a broad, white superciliary stripe, almost meeting fellow on forehead, becoming buffy on hind-neck; a broad, black stripe below eye

and across auriculars coalescing behind with narrow breast-band of same color; *enclosed space pure white*; breast and belly white or buffy white, narrowly and finely cross-barred with black, usually with disconnected brace-shaped markings; chest mingled heavily or slightly with vinaceous-rufous below the black band; sides and flanks broadly striped with cinnamon-rufous, marked with black and white and blending with pattern of wing; bill black. *Adult female*: Similar to male, but throat and superciliary line deep buff instead of white; black of throat, cheek-band, and crown merely indicated by blackish spots; general coloration a little more subdued. This bird varies interminably within the limits laid down; no two birds are exactly alike, and albinistic and melanotic specimens are not rare. Spring birds are brighter colored than fall specimens. Length 9.50-10.75 (241.3-273.1); wing 4.33 (110); tail 2.33 (59.2); bill .56 (14.2). Females average a little smaller than males.

Recognition Marks.—Robin size; not crested; white throat of male and buffy throat of female distinctive; *wah-quoit* notes.

Nesting.—*Nest*: on ground, a mere depression, indifferently lined with grasses, leaves, etc. *Eggs*: 10-26, usually about 18, white, pure or nest-stained; pyriform-ovate. Av. size, 1.20 x .94 (30.5 x 23.9). *Season*: May 20-June 10; one or two broods according to latitude.

General Range.—Eastern United States and southern Ontario, from southern Maine to the South Atlantic and Gulf States, west to central South Dakota, Kansas, eastern Texas, etc. It is recently extending its range westward along lines of settlement, and has been successfully introduced into various Western and Pacific States.

Range in Washington.—Locally introduced thruout the State. Well established in the vicinity of all the larger towns and upon the San Juan Islands.

Authorities.—["American Quail (introduced).," Johnson, Rep. Gov. W. T. 1884 (1885) 23.] **Rathbun**, Auk, Vol. XIX. Apr. 1902, p. 133. **Ra. Kk. J. B. E.**

Specimens.—(U. of W.) C. E.

BOB-BOB-WHITE.—mellow and clear across the meadows comes the fine challenge of the American Quail. The last rays of the setting sun gild the top rails of the old worm-fence, which is the chosen trysting place, and the happy gallant sounds his notes again and again, both as a call to his timid mate and as a formal notice to any unsatisfied rival. At close range the notes have usually a triple character, but the first one does not carry well, and the bird is known to distant hearers as *Bob-white* or, better, *Wah-quoit*, after the Indian rendering.

Fierce battles sometimes ensue upon these challenges, but once his domestic fortunes are settled, there is no more devoted husband and father than the Bob-white. Attachment to home and attachment to companions are both prevailing characteristics; and it is these which, together with his nimbleness a-wing, make him the ideal upland game bird. Once a flock is scattered, it will assemble again; and so certain is it to return to the same range, that the last member of it may be slaughtered, if the hunting is pushed to such an unwise extreme.

In the fall, one who knows them well may become aware of a faint murmuring and rustling which proceeds from the ground, and by attention may perceive the birds as they scuttle, apprehensive, thru the grass, and pause at every cover, hoping against hope that they are not seen. They would rather not fly, and if not too closely pressed, will scamper away with perking heads and lifting crests, or else traverse an unsheltered stretch with affected daintiness, like ladies at a muddy crossing. Or, again, they will gather closely and "freeze," pending the final outcome. You approach slowly in dead silence—nearer—nearer—you cross the invisible danger-line. Pouf! and they are off like fragments of an exploding bomb.

Family groups, or coveys, are the rule in fall, when the Bob-whites frequent stubble-fields, fence-rows, weed-grown fallows, and brushy pastures. When pointed, not too closely, the birds will quit the covey by little irruptions of twos and threes, affording the hunter the much-prized opportunity for successive shots at the same brood. Truth to tell, he earns his meat, for each bird yields a mere bite, and they fly like little meteors. Flash! Bang! and an intrepid soul has paid its ransom of a mouthful of clay,—very sapid, they tell me.

When the hunter and his dog have passed, the scattered flock reassembles, one member only, presumably the parent bird, if spared, sounding the call—a low, sweet, penetrating, *quoi-hee quoi-hee quoi-hee*. Much time is spent in search of the missing, for the Bob-whites are devoted brothers, and the quest does not end until the pangs of hunger intervene to distract attention.

At the approach of winter decimated coveys unite to form "packs," sometimes numbering as high as seventy-five birds, and these remain together thru the season. In extreme emergency Bob-whites will resort to trees, but roosting is ordinarily upon the ground, where the company, of whatever size, squats in a circle, tails to center and heads pointing outward, alert to every danger.

About the first of April the flocks scatter, and the search for mates commences. Altho coming of polygamous ancestors, Bob-white is faithful thru the nesting season to a single mate. Indeed, it is not improbable that, where undisturbed, the same birds reunite year after year, after the fashion of the songsters. Instances are on record where the father has assumed charge of a first brood while the female was occupied with the incubation of another.

The number of eggs laid by the female Bob-white varies greatly according to locality. In the South, where at least two broods are raised in a season, the sets often contain only ten or a dozen eggs. But in the North, where only one brood is reared, no self-respecting Quail would lay less than eighteen eggs; and in several instances twenty-eight, thirty, and even thirty-two, have been found in a single nest. Needless to say, in these cases the eggs are piled two and three layers deep.

The female is most particular regarding her eggs, and she resents even a

casual inspection of them by human beings. If she suspects the nest has been visited, and especially if the eggs have been handled, she will destroy the entire set forthwith.

As soon as hatched the young follow their mother about, peeping lustily and behaving very much as chickens do under similar circumstances. At the advent of danger, the chicks disappear as if by magic, while the mother covers the critical moment of their retreat either by making a sensational departure herself, or by feigning lameness, or, sometimes, flying in the face of the intruder. The young may be discovered by *feeling* about in the grass, or under dead leaves, sticks, etc. Clasped hands make a good foster mother for a few moments, but it is more fun to retire and wait for the mother's cluck which brings the little ones scampering from their hiding places.



Taken near Spokane.

Photo by F. S. Merrill.

MRS. BOB-WHITE'S NESTFUL.

Bob-whites have been imported into this State at frequent intervals thru the last twenty-five or thirty years. They seem to thrive alike in the grain fields of the Palouse country and in the cultivated valleys of western Washington, and are especially well established on Whidby Island and others of the San Juan group. Besides furnishing, under reasonable regulation, the best of sport, these birds render valuable services to the farmer. While they are

fond of grain, this is gleaned only from the surface of the ground, where they also find large quantities of weed-seed and capture amazing numbers of weevils, grasshoppers, and other injurious insects. The wheat-grower can well afford to encourage the propagation of this bird, and ought to derive a sufficient annual revenue from sportsmen to make it worth his while.

No. 227.

MOUNTAIN QUAIL.

A. O. U. No. 292. **Oreortyx pictus** (Dougl.).

Synonym.—MOUNTAIN PARTRIDGE.

Description.—*Adults*: A lengthened crest (shorter in female) of two straight black feathers; foreparts in general slaty gray, changing on nape and sides of lower neck to dark olive brown of back, wings, and tail; throat chestnut, bordered sharply on sides by line of black continuous to eye; this in turn by broken line of white; forehead ashy; base of bill bordered by white; belly centrally chestnut; sides and flanks broadly banded, black, white, and chestnut or rufous; crissum black, streaked with chestnut; inner secondaries and tertials broadly edged with buffy or tawny, forming conspicuous lengthwise border in folded wing. *Immature*: Above grayish brown speckled with white; throat and belly whitish; breast gray marked by triangular spots of white; tip of crest pale brown varied by white. Length of adult: 10.50-11.50 (266.7-292.1); wing 5.35 (135.9); tail 3.30 (83.8); tarsus 1.50 (38.1).

Recognition Marks.—Robin size but more nearly small grouse in appearance; long straight crest distinctive; "larger" wing-sound in rising as compared with California Quail.

Nesting.—*Nest*: under shelter of log or fallen branch, a slight depression in earth, lined scantily with dead leaves, grass, etc. *Eggs*: 10-12, creamy buff or dull pinkish buff, unmarked, or sometimes stained with pale brown. Av. size, 1.46 x 1.04 (37.1 x 26.4).

General Range.—Pacific Coast district from Santa Barbara north to Washington.

Range in Washington.—Well established at lower levels and in borders of cultivated districts west of the Cascades. Possibly native in Washington, but numbers augmented by importation at an early date.

Authorities.—Cooper and Suckley, Rep. Pac. R. R. Surv. Vol. XII, 1860, p. 225. Rh. Ra. B. E.

Specimens.—(U. of W.) Prov. P. C. B. N. E.

THE Mountain Quail, as it is generally called, and its close relative, the Plumed Quail, are neither of them native to Washington, several crates of living birds having been imported from California between the years 1880 and 1890. So kindly did they take to the conditions they found here, that, at the end of a long season of protection imposed by law, they fairly swarmed in

suitable localities. But what a change a few years of persecution have wrought! Where formerly a dozen large coveys could be found within a small area, only an occasional solitary bird, rarely a pair, is now left of this gem among our upland birds. The entire blame cannot be laid at the door of the sportsman, altho modern rapid-fire guns have played their part. By far the worst havoc has been wrought by the treacherous nets, snares, and traps of all de-



MOUNTAIN QUAIL.

scriptions, which unscrupulous persons set in defiance of law. Too lazy to hunt, these human vermin catch the poor birds alive and wring their necks.

Before close association with mankind had proved so fatal a mistake, these partridges were among the tamest and most confiding of birds. Utterly unsuspecting of danger, they would run into the yard and eat with the farmer's hens, paying little attention to any passing human being. When flushed from their haunts in the woods, the whole covey would merely fly into the nearest bushes and trees. Now all is changed, for the "fittest" survivors have inherited the knowledge that mankind is their deadliest enemy.

These "Big Blue Quail," as they are often termed, are the largest of all the partridges of North America, and the sudden whirring of wings when they leave cover may easily be mistaken for that of the Ruffed Grouse. If the bird

be a yearling, this whirr is generally accompanied by a rapidly delivered *peep-peep-peep*, not at all unlike that of a young chicken. The call note of the adults is a liquid whistle approaching somewhat the syllables *hu-uccé-u*, rapidly delivered and slightly accented on the middle note. It is not at all like the Bob-white's note, but might easily be mistaken for some boy signaling to a friend.

The conversation of a hen partridge with her newly hatched chicks reminds one of nothing so much as a diminutive edition of a barn-yard hen mother.

Somewhat inclined to high altitudes, as their name implies, the favorite localities for these birds are the large areas in our forests that have been cleared of standing timber. In the course of a year or two these "burns," as they are called, become overgrown with huckle-berry, salal, and occasionally a dense growth of the wild sweet pea. Here is food in abundance at all seasons; for in summer the decayed mold of the fallen trees contains grubs and in-



Taken near Tacoma.

Photo by J. H. Bowles.

NEST AND EGGS OF MOUNTAIN QUAIL.

sects galore as change from fall and winter diet of berries and seeds. Tell-tale hollows in the soft dry earth, sprinkled with a feather or two, speak of luxurious dust-baths, and a net-work of three-toed tracks on a neighboring wood-road shows where the band has taken its morning constitutional.

It will probably always be open to doubt as to whether these two varieties,

pictus and *plumiferus*, interbreed, but the indications sometimes point that way. Both are found in the same localities; and both kinds are occasionally taken from the same flock during the hunting season. To this must be added the fact that gradations between the two types are by no means infrequent.

J. H. BOWLES.



Taken near Victoria.

Photo by the Author.

LOOKING NORTHWEST FROM CEDAR HILL.
SHOWING FAVORITE COVER OF THE MOUNTAIN QUAIL.

No. 228.

PLUMED QUAIL.

A. O. U. No. 292 a. *Oreortyx pictus plumiferus* (Gould).

Synonyms.—PLUMED PARTRIDGE. MOUNTAIN PARTRIDGE.

Description.—Similar to *O. pictus*, but slaty blue of foreparts displacing olive-brown on nape; general tone of the upperparts a little lighter olive; forehead lighter or whitish; the border area of inner secondaries and tertials lighter buff or buffy white.

General Range.—Both sides of the Cascade range (but chiefly westerly) in Oregon, the Sierra Nevadas, and southern coastal ranges of California and Lower California.

Range in Washington.—Sparingly introduced west of Cascades. Characters likely to vanish thru absorption into *O. pictus*.

THIS bird, rather than the preceding, deserves the name Mountain Quail, for its normal range includes the middle slopes of the Sierra Nevada Mountains. The distinction in names, therefore, is purely arbitrary, but since it is established it would better be adhered to. Importations to Washington have been chiefly of the coastal form (*O. pictus*), but a specimen with a lighter colored wing-stripe turns up now and then to show that importers have been careless as to where they got their stock, and the resultant breed on Puget Sound will evidently be an amalgamation of the two forms. There are no local differences of range or habit.

No. 229.

CALIFORNIA QUAIL.

A. O. U. No. 294. **Lophortyx californicus** (Shaw).

Synonyms.—CALIFORNIA PARTRIDGE. VALLEY QUAIL (Name properly restricted to *L. c. vallicola*). TOP-KNOT QUAIL.

Description.—*Adult male*: Recurved crest glossy black; throat black, bordered sharply by white line curving on cheek and passing below eye to bill; forehead whitish, streaked narrowly with black; a clearly defined lateral white streak from eye bounding olive-brown crown-patch; general color of upperparts ashy overlaid with olive-brown; the feathers of occiput, nape, and sides of neck narrowly edged with blackish and speckled with white; the inner webs of tertials rufous brown, forming conspicuous stripe; breast slaty-blue; sides color of back, sharply streaked with white; remaining underparts tawny to bright chestnut, the feathers of the belly, except centrally, sharply bordered with black, and presenting a handsomely scaled appearance. *Adult female*: Similar to male, but without characteristic head-markings; breast olive-gray; belly whitish or pale tawny with black edgings as in male. *Immature birds* are grayish brown above with dusky and whitish edgings on back and wings, feathers of nape with whitish shaft-streaks and dusky borders. Adult length: 10.00-11.00 (254-279.4); wing 4.50 (114.3); tail 4.40 (111.8); tarsus 1.25 (31.8).

Recognition Marks.—Robin size; recurved crest of 4 to 10 feathers distinctive; black throat of male, scaled appearance of belly (except centrally); size of Bob-white; weight much less than that of Mountain Quail.

Nesting.—*Nest*: a slight grass-lined hollow usually under protection of fallen tree or bush-clump. *Eggs*: 12-18, creamy white or buffy, spotted or coarsely blotched with yellowish brown. Av. size, 1.20 x .93 (30.5 x 23.6). *Season*: c. May 25; one brood.

General Range.—Pacific Coast region from Monterey, California, north to southern Washington; introduced in Washington and southern British Columbia.

Range in Washington.—West-side, probably indigenous but also heavily introduced, and now thoroly established at all lower levels in or near cultivated areas.

Authorities.—*L. californica*, Bonap., **Cooper and Suckley**, Rep. Pac. R. R. Surv. XII. pt. II. 1860, p. 225. L^r. Ra. Kk. B. E.

Specimens.—(U. of W.) Prov. B. E.

THE name Painted Quail has been given to another of our North American partridges, but it could scarcely have been more deserving of the title than the subject of this sketch. The female, as is usual in most birds, is rather dull in coloring, but the male is truly a beauty. His lower parts, from bill to tail, are one continuous contrast: jet black, purest white, old gold, chestnut, silver, and other colors have been laid on by no uncertain hand. In fact, Dame Nature seems to have used him for a palette in making up some of her most brilliant cloud effects.

This bird and its near relative, the Valley Partridge, are not natives of Washington; but, like the Mountain and the Plumed Partridge, were introduced here from the State of California. Dr. Suckley, one of our pioneer naturalists, tells us that as early as 1857 two shipments of birds were turned out in the vicinity of Puget Sound by Gov. Charles H. Mason and a Mr. Goldsborough. Conditions seem to have proved most suitable for them, since, in the face of constant persecution, they continued to increase in numbers, spreading their ranks over new territory every year.

Altho often found in dry, bushy uplands, they are much more inclined to damp localities than the Mountain Partridge, their favorite haunts being the low ground of the river valleys. Here they may be found searching for seeds in the weed-patches of the open fields, or gleaning amongst the growing cabbages, beans, and other vegetables of the farmer's garden. Indeed, few birds are so much the friends of the farmer as our partridges, for their food consists almost entirely of weed-seeds, worms, beetles, grass-hoppers, and other insects. What little of the newly-sown crops they may eat is repaid a thousand fold by the vast amount of good they accomplish.

Many years' acquaintance with the human race has shown them the value of discretion, and they have, consequently, developed no small degree of foresight. Wherever a flock is found there is always a dense stretch of brush or heavy timber close by; and, when frightened, the birds all rise at once, and promptly make for this haven of refuge. Unlike the Mountain Partridge, they very seldom fly into a tree, generally preferring to conceal themselves in the thick undergrowth, where they evade capture by hiding and running.

Their call notes are totally unlike those of our other Washington partridges. They seldom or never whistle; the challenge of the male in spring closely resembles the concluding remarks of our barnyard biddy when she has laid an egg. This crowing, or cackling note, closely assimilates to the syllables, *kukwákuk*, *kukwákuk*, *kukwákuk*, strongly accented on the middle member of

each group. It is very loud and rather harsh, being distinctly heard from a distance of at least half a mile.

Resident thruout the year, these birds seldom stray very far from home, but their nesting habits are so remarkable that no hard and fast rules can be laid down for them. The first eggs appear during the latter part of May, the conservative quail laying from twelve to eighteen of them, in a shallow grass-lined hollow that she arranges under some fallen log. At other times, however, she is not in the least particular in whose nest she deposits her treasures, even the little Towhee having in this way received what must have been a most unwelcome addition to her household duties. One nest of the big Sooty Grouse, containing nine eggs of the rightful owner, proved so attractive that it received no less than three additional eggs from some fascinated quail mother. Nature had directed her so well—or was it coincidence?—that the state of incubation in the eggs of both quail and grouse showed they would all have hatched at about the same time.

Late in the fall several coveys will often join together in what are known as "packs," as many as seventy-five or a hundred birds being found in one group. Years ago it was not unusual in California to find packs of five or six hundred, but these have long since given way before the advance of civilization.

J. H. BOWLES.

No. 230.

VALLEY QUAIL.

A. O. U. No. 294 a. **Lophortyx californicus vallicola** (Ridgw.).

Synonyms.—VALLEY PARTRIDGE. CALIFORNIA VALLEY QUAIL.

Description.—Like *L. californicus*, but lighter in coloration; upperparts grayish brown, with inner edges of tertials buffy or whitish; sides grayish olive or grayish brown.

General Range.—Interior districts of California and Oregon south to Cape St. Lucas; western Nevada; introduced in Washington.

Range in Washington.—Sparingly introduced from California. Reported only from vicinity of Tacoma.

Authorities.—*Callipepla californica vallicola*, **Rhoads**, Auk, X. Jan. 1893, p. 17. B.

Specimens.—B.

A CASE precisely parallel to that of *Oreortyx pictus* and *O. p. plumiferus* occurs here. Importers have been careless as to which form was brought in for propagating purposes, and we now find both in the same local range. To a student of geographical variation, this remixing of incipient species thru importation is distressing. By all means let us import game birds and plenty of

them, but let some representative and responsible body, like the State Fish and Game Protective Association, decide upon the stock required, and keep the breed true—else we shall have a mere barnyard.

No. 231.

SOOTY GROUSE.

A. O. U. No. 279 a. *Dendragapus obscurus fuliginosus* Ridgw.

Synonyms.—BLUE GROUSE. BLACK GROUSE. WOOD GROUSE. LARGE WOOD GROUSE. MOUNTAIN GROUSE. HOOTER.

Description.—*Adult male*: General plumage sooty slate, color deepest, nearly or quite black, on upper back and in ring about throat, lighter, slaty, on breast and belly, feathers mottled with buffy and tawny on wings, back, and sides, with ashy (lightly) on rump and upper tail-coverts, and with large admixture of white on lower belly and under tail-coverts; throat heavily flecked with white; shoulder-patches of pure white, more or less concealed; subterminal area of tail clear slaty-black; terminal band ashy gray, .30-.60 wide; comb over eye and concealed spot of naked skin, the tympanum, orange-yellow. Bill black; feet with black soles. *Adult female*: Ground-color of male, everywhere, save on concealed webs of rectrices and quills, more or less mottled by ochraceous and tawny, bluish ash, and white, the mottling of back falling more or less into bars. *Young females*: Like adult, but feathers of underparts with hammer-headed white shaft-lines. *Adult male*, length: 20.00-22.00 (508-558.8), sometimes 24.00 (609.6); average of seven males taken at Glacier: wing 9.15 (232.4); tail 6.40 (162.6); bill .80 (20.3). *Female*, length: 17.00-19.00 (431.8-482.6); av. of three Glacier specimens: wing 8.46 (214.9); tail 5.15 (130.8); bill .76 (19.3).

Recognition Marks.—Crow size; dark slaty coloration; tarsi bare below, and tail-coverts not white-banded, as distinguished from Franklin Grouse, larger; tail definitely tipped with white, as compared with black tail of *D. o. richardsonii*.

Nesting.—*Nest*: on ground, a slight hollow, lined with a few twigs, grasses, and stray feathers, usually under protection of tree, bush clump, or grass. *Eggs*: 6-12, 16 of record, pale creamy-buff, sharply and sparingly freckled with reddish brown. Av. size, 2.06 x 1.36 (52.3 x 34.5). *Season*: May-June, according to altitude; one brood.

General Range.—Timbered sections from California north to Alaska, east to Nevada, Idaho, and eastern British Columbia, where shading into *D. obscurus* and *D. o. richardsonii*, respectively.

Range in Washington.—In coniferous timber thruout the State, resident from sea-level to the limit of trees. May possibly be replaced by *D. o. richardsonii* in the Blue Mountains, but specimens from the northeastern corner of the State are apparently true *fuliginosus*.

Authorities.—*Tetrao obscurus*, Say, **Baird**, Rep. Pac. R. R. Surv. Vol. IX. 1858, 621. T. C&S. L¹. Rh. D¹. Kb. Ra. B. E.

Specimens.—(U. of W.) Prov. P. C. BN. E.

THIS, the largest of the wood grouse and, in point of numbers at least, the leading game bird of Washington, is found wherever there is coniferous timber. Indeed, the Blue Grouse and the Douglas fir are nearly inseparable. In the sheltering branches of this tree the bird takes refuge in time of danger; from its commanding elevation he most frequently sends forth the challenges of springtime; and in its somber depths he hides himself thruout the winter season. So great is this devotion on the part of the bird that it is found indifferently at sea level or at the timber line of the highest mountains; and it will



Taken near Spokane.

Photo by W. H. Wright.

SOOTY GROUSE ON NEST.

COVER CUT AWAY ON FORMER VISIT. NOTE THE VERY NARROW TERMINAL BAND OF WHITE ON TAIL INDICATING APPROACH TO D. O. RICHARDSONII TYPE.

not willingly quit a favorite piece of woodland even tho the supporting forests be cut away on every side. Only last summer, well within the city limits of Seattle, I frightened a company of Sooty Grouse, wild ones, that were pasturing on ground worth, modestly, \$15,000 per acre; and they buried themselves in fir trees hard by, so effectually that not all the "plain clothes men" on the Seattle force might have found them.

The Grouse's year begins in March, when the male begins to hoot. This operation is conducted chiefly in the trees, but as the season advances and love-making becomes more earnest, the birds resort to the ground or choose stations

on some prominent stump or bowlder. The bird, as a rule, is one of the most phlegmatic of fowls, and his courting antics, grotesque enough in themselves, are conducted with a gravity which makes them even more absurd. Whatever the bird's situation in hooting, the air-sacs of the throat, chest, and neck, are first inflated. These auxiliary parts are capable of enormous distension, inso-much that the total bulk of the sacs, together with their covering feathers, during excitement, exceeds that of the body itself. The hooting, or grunting notes, of this Grouse are among the lowest tones of Nature's thorobase, being usually about C of the First Octave, but ranging from E Flat down to B Flat of the Contra Octave. *Hoot, hoot, hoot, tu-hoot*, the legend runs, altho there



Taken near Tacoma.

Photo by the Author.

A NEST IN THE FIR WOODS.

is a prefatory note of the same character which is inaudible at a distance; and the bird not infrequently adds another at the end, after the slightest appreciable pause, as tho he required a fraction of a second in which to recover from the effort of the double note. There is in the act of utterance a corresponding pulsation of the air sacs, but these can serve only as a sounding board, for the noise is made in the syrinx, and may be passably imitated in that of a freshly-killed specimen by placing the thumb and forefinger over the apertures, and blowing at the proper intervals thru the entering windpipe. The sound may also be well reproduced by the human voice, and we have offended many a hooter ere now by challenging in his preserves.

As the hooter becomes vehement he struts like a turkey-cock, spreading the tail in fan-shape, dropping the wings till they scrape the ground, and inflating his throat to such an extent as to disclose a considerable space of bare orange-colored skin on either side of the neck. This last certainly makes a stunning feature of the gallant's attire, for Nature has contrived that the feathers immediately surrounding the bald area should have white bases beneath their sooty tips.



Taken near Spokane.

Photo by F. S. Merrill.

A NEST IN THE PINE WOODS.

During excitement, then, as the concealing feathers are raised and reversed, a brilliant white circle, some five inches in diameter, suddenly flares forth on each side of the neck, to the great admiration, no doubt, of the observant hen.

These more emphatic demonstrations are probably reserved for such time as the hen is known to be close at hand, for I have never frightened a strutting cock without finding a female hard by, at least at no greater distance than the lower branches of a neighboring tree. She has

responded to the earlier calls of the male by a single musical *toot* note, uttered at intervals of approach; but once arrived at the trysting place she has become very shy, and will take no part in the celebration, save by a few tell-tale clucks and many coy evasions. On these occasions, also, the cock works himself up into such a transport that he becomes oblivious to danger, so that he may be narrowly observed or even captured by a sudden rush.

The Wood Grouse are probably polygamous, but contests between the

males are infrequent, and there is no great disparity in numbers between the sexes, so that the male, oftener than otherwise, mates but once during a season. At least he is not known to carry on his amours abreast. When the female has laid her complement of eggs, from six to nine, in a shallow, leaf-lined depression at the base of a tree, bush, or rock, the male joins himself to a small company of his widowed fellows, or else sulks out the season in ineffectual hooting.

In choosing a nesting site the female is not at especial pains to find con-



Taken near Tacoma.

Photo by Dawson and Bowles.

SOOTY GROUSE ON NEST.
AN EXAMPLE OF PROTECTIVE HARMONY.

cealment, relying rather upon the protective harmony of her surroundings,—how securely may be noted in the accompanying illustration, where the cover was of the slightest, yet perfectly in keeping. The bird even sits with half-closed lids, in order that the glint of the eye, the “high light,” may not betray her presence.

The creamy buff eggs, also, with their light brown spots and splashes, are comparatively inconspicuous when exposed. In this connection it may be well to note a claim advanced by D. E. Brown that eggs are occasionally unmarked



Taken near Chelan.

Photo by the Author.

ANOTHER STUDY IN PROTECTIVE HARMONY.

THERE ARE THREE SOOTY GROUSE CHICKS IN THIS PICTURE, BUT THE PHOTOGRAPHER HIMSELF DOES NOT KNOW THE EXACT WHEREABOUTS OF MORE THAN ONE.

and pure white. He has shown us an egg taken from the bird by a Nooksack Valley rancher, on the 24th of May, 1905, which is of a pale creamy tint, unmarked. Another rancher in the same neighborhood secured an egg under like circumstances, and after making search in the vicinity, discovered a nest containing eight eggs, all *pure white* and exactly similar to the one taken from the oviduct of the bird.

The chicks are brought off after a three weeks' vigil and the mother leads her brood about until they are fully grown. When surprised a month later, as at a dust-

bath, of which they are exceedingly fond, the bantlings rise to the nearest trees and secrete themselves, while the mother makes herself conspicuous in effort to distract attention. Or, if somewhat disciplined by hunting, the covey makes off thru the air by twos and threes, endeavoring always to keep the same direction, that they may speedily reassemble when out of harm's way.

Grouse feed much at the lower levels, and even venture into the open in late summer and early autumn. They feed largely upon berries at this season,

being especially fond of the red huckleberry, or peacock berry (*Vaccinium parvifolium*), which they devour together with its leaves. Salal-berries are also staple on Puget Sound, huckleberries in the mountains, and service-berries (*Amelanchier florida* and *A. cusickii*) east of the Cascades. This diet is varied by grasshoppers and other insects, as well as by seeds of many sorts.

Sooty Grouse lie well to a dog, but unless previously filled with the fear of man, they are likely to make tame targets as they rise heavily into the nearest tree, and tamer yet as they sit and look down inquiringly at the hunter.



Taken in Victoria.

From a photograph, copyright, 1908, by W. L. Dawson.

NEST AND EGGS OF SOOTY GROUSE.

THE OAK-LEAF NEST.

The young of the year, in particular, are very foolish, allowing themselves to be pelted repeatedly with stones until finally struck and killed. This trick has earned for them, in common with other species, the name "fool hen." Mr. D. E. Brown says the Sooty Grouse will hiss like a gander, especially when treed by a dog. The bird will thrust out its neck and peer down defiantly, hissing and squirming in anger over its interrupted meal.

Under repeated fire, the Wood Grouse learns not only to make away with

great celerity, but also to hide in the tree-tops, squatting and freezing so perfectly that it requires a practiced eye to detect it. The Indians used to be very successful on the still-hunt, especially in winter, when the birds keep altogether to the tree-tops, spending the season in a semi-lethargic state, feeding exclusively upon fir buds.

The flesh of the Sooty Grouse, altho counting as dark meat, offers excellent eating in the proper season. The bird attains a goodly size, three, four, or even five pounds in the case of a cock, and there is no reason to suppose that the supply would not last for several decades yet, if shot under proper restrictions as to quantity and season. As matter of fact, however, four-fifths of the birds already killed in this State have been slaughtered by campers and prospectors in the summer months. The relative abundance of the Sooty Grouse has been correspondingly reduced, and unless our citizens take a saner view of their privileges, the most valuable of our game birds will ultimately become a tradition.

No. 232.

FRANKLIN'S GROUSE.

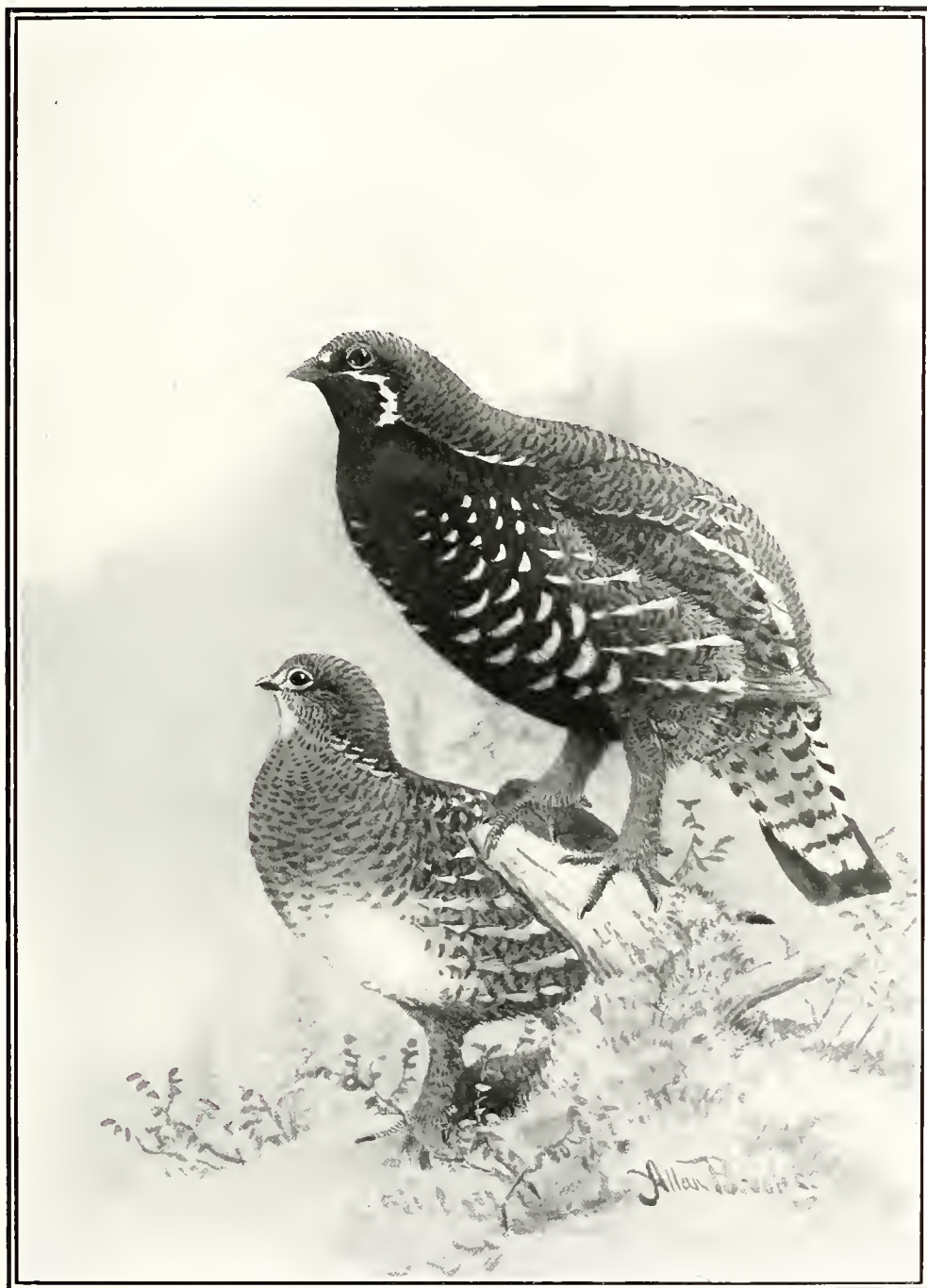
A. O. U. No. 299. **Canachites franklinii** (Dougl.).

Synonyms.—FRANKLIN'S SPRUCE GROUSE. FOOL HEN. BLUE GROUSE. TYEE GROUSE. MOUNTAIN GROUSE. WOOD GROUSE.

Description.—Somewhat as in foregoing, but lighter, and plumage more varied; upper tail-coverts strikingly banded black-and white. *Adult male*: Above finely varied black and grayish in transverse pattern; below chiefly black, throat sharply bordered on sides by crescentic white stripe, feathers of breast and sides tipped with white marks of increasing size posteriorly; flanks color of back with sharp wedge-shaped white marks; tail uniformly black or narrowly tipped with white; upper tail-coverts black broadly tipped with white, the lower tail-coverts still more extensively white; a touch of white on lore; naked skin over eye orange. In certain specimens the black of breast is cut off from throat by invasion of gray, and correspondingly restricted below. *Adult female*: Above chiefly black but highly varied by transverse bars and skirtings of gray and ochraceous or buffy; below chiefly whitish or tinged with ochraceous on breast and sides and barred with black; feathers of flanks and scapulars broadly streaked centrally with white; tail black with white tip (much broader than in male). Length of adult: 15.00-17.00 (381-431.8); wing 7.00 (177.9); tail 5.50 (139.7).

Recognition Marks.—Small crow size, mottled black and gray above; below black (in male) sharply marked and defined by white; upper tail-coverts conspicuously banded black-and-white.

Nesting.—*Nest*: Much as in preceding. *Eggs*: 8-14, creamy buff to pale



FRANKLIN GROUSE, MALE AND FEMALE.

cinnamon, spotted and blotched with reddish brown or burnt umber. The spots are distributed over entire surface, usually sparingly, more heavily than in *D. o. fuliginosus* altho never becoming confluent. Av. size, 1.68 x 1.25 (42.7 x 31.8). Season: c. June 1st; one brood.

General Range.—Mountains of northwestern United States and western Canada, north to about Latitude 60° in Alaska.

Range in Washington.—Probably to be found in all the mountainous districts, but more common in northern Cascades and mountains of Stevens County.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle: Coues, Vol. II, pp. 181, 182.] *Tetrao franklinii*, Douglas, **Cooper and Suckley**, Rep. Pac. R. R. Surv. XII, pt. II, 1860, p. 221. T? Rh. D¹. Sr. D². E(11).

Specimens.—Prov. C.



FEMALE FRANKLIN GROUSE.

mens taken in the mountains of Idaho, the species probably has its center of abundance in the same region today; but it is found northward far into British

THERE seems to be a lack of exact information about this bird, and we are not able to add much to the meager fund already at hand. It so closely resembles the Canada Grouse (*Canachites canadensis*)^a in appearance, that it is presumed to resemble it in habit also, and much that is said of its behavior must be understood as referring to the better-known form. Originally described (but not scientifically named) by Lewis and Clark from speci-

a. Recently split up into several forms, the nearest neighbor being *C. c. osgoodi* of Alaska.



Taken in Chelan County.

Photo by the Author.

A CHARACTERISTIC HAUNT OF THE FRANKLIN GROUSE.

Columbia, and is said^a—upon what authority I do not know—to extend westward to include the coast ranges of Oregon and Washington. I have shot it in late summer in the mountains of Yakima County, and in the upper Stehekin Valley in Chelan County. In the summer of 1908 I heard notes on Mount Rainier which I have been attributing to this bird, but it was neither seen nor heard on a trip thru the Olympics in the summer of 1890.

Be that as it may, it is certain that Franklin's Grouse enjoys a general distribution at the higher levels of the central ridge of the Cascade range, and that it extends at least as far south as the Natchez Pass, probably further. From its unsophisticated ways it has long been known to prospectors and timber cruisers by the name "fool hen." If discovered feeding in the trail, a little company of them will merely step aside to let the cavalcade pass, or else post in the nearest trees and bushes. Missiles have only a curious interest until a bird is struck, and several of the flock may be shot at leisure without the remainder being frightened away.

The general economy of the Franklin Grouse is much that of the Sooty (*D. o. fuliginosus*). They range quite to timber-line. They subsist largely upon browse, preferring to other the buds and needles of coniferous trees, but they also descend in summer to gather berries of various sorts, and ground-fare. They appear to be strictly resident wherever found, and spend the winter season in the depths of the fir trees.

The male of the Franklin Grouse is said to drum in the spring after a unique fashion. The bird beats his wings rapidly in mid-air while he sinks slowly from some elevated station to the ground. Or, again, he rises as he rolls his reverberant thunder, and only ceases when his former perch is reached. He has also various strutting antics, including a distension of the red eyebrows until they nearly meet over the crown. The tail is spread to the utmost, then alternately half furred, first on one side and then on the other with a peculiar, silken, rustling sound. The



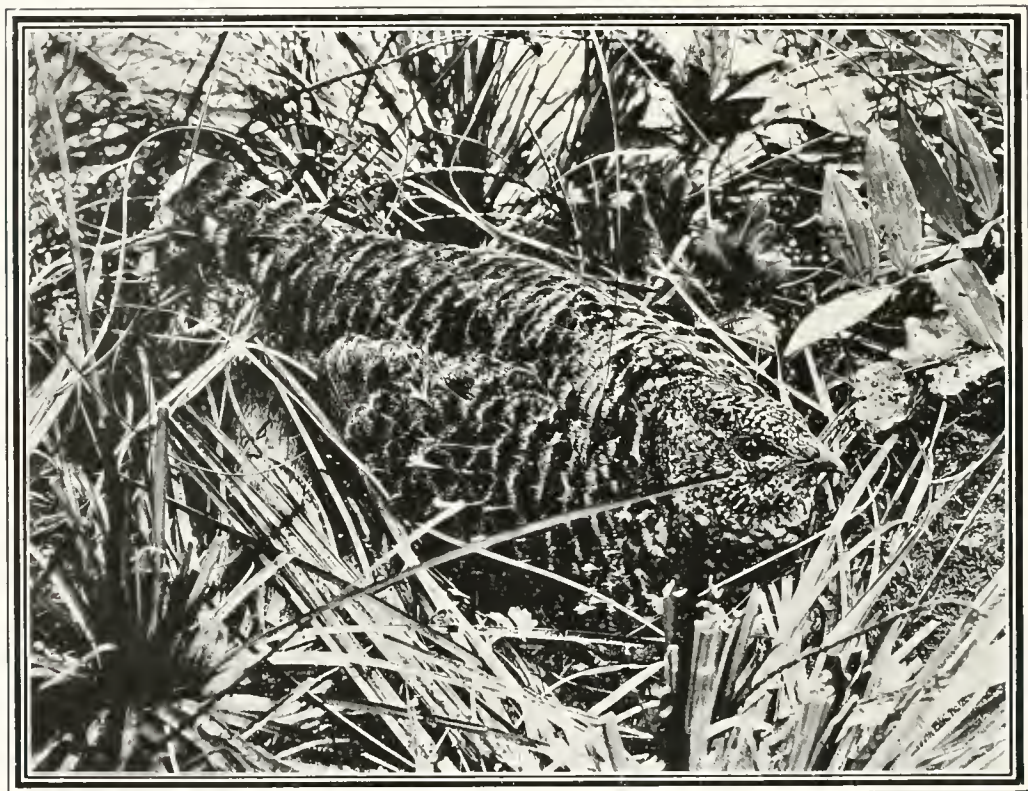
Taken in Stevens County.

Telephoto by W. H. Wright

FRANKLIN GROUSE, MALE.

a. A. O. U. Check List, 2d Ed., 1895.

bird is not credited in any published records with important cries, but I am at a loss otherwise to account for certain musical notes heard in Okanogan County, *poot-toot*, reminding me of nothing else so much as abbreviated and very comfortable sighs of fog-horns pitched to thirds. The ranchers assured me that it was the call of the cock Franklin, answered by that of the hen; but I would sooner believe the converse, for the *toot* was always stronger, bolder, and of a lower key.



Taken in Stevens County.

Photo by W. H. Wright.

FEMALE FRANKLIN GROUSE ON NEST.

Well identified eggs of the Franklin Grouse are still rare, and the nesting habits appear to be resting under the same shadow of inattention as the birds themselves. This is, of course, a humiliating confession in the face of the remarkable photographs secured for us by Mr. W. H. Wright, of Spokane. Mr. Wright probably knows more about these Grouse than any other observer, and we hope that he will some day give us a monograph upon the subject. All

we can testify to personally is that the chicks are able to fly at an incredibly early age. With such a start it would seem that they might keep well out of harm's way, instead of offering themselves as a target to the first passerby.

No. 233.

CANADIAN RUFFED GROUSE.

A. O. U. No. 300 a. *Bonasa umbellus togata* (Linn.).

Synonyms.—PHEASANT. PARTRIDGE. RUFFED GROUSE. DRUMMER. GRAY-TAIL.

Description.—*Adult male*: Neck-tufts of lengthened feathers glossy black; above warm brown or gray, varied in endless pattern by black, white, and ochraceous markings; tail normally gray but sometimes brownish, crossed by six or seven narrow bands and one broad subterminal band of black, tipped with light gray; throat buffy or ochraceous; underparts mixed white and buffy, heavily barred with brown, each bar bordered narrowly with dusky, marks on flanks entirely dark brown or blackish. *Adult female*: similar to male but smaller and neck-tufts much reduced in size. Length of adult: 15.00-19.00 (381-482.6); wing 7.00-7.50 (177.8-190.5); tail 5.50-7.00 (139.7-177.8).

Recognition Marks.—Little Hawk to Crow size; neck ruffs and varied brown and gray coloration unmistakable; tail normally gray as compared with next form.

Nesting.—*Nest*: a slight depression at base of tree or bush-clump in low woods, sparingly lined with twigs and dead leaves. *Eggs*: 8-14, creamy white to creamy buff, unmarked or sparingly speckled with pale rufous. Av. size, 1.62 x 1.21 (41.2 x 30.8). *Season*: May; one brood.

General Range.—"Resident in Canadian zone forests of the northeastern United States, British Provinces, and eastern parts of Oregon and Washington" (Bailey).

Range in Washington.—Resident in timbered valleys of eastern Washington, chiefly along eastern slopes of Cascades, intergrading with *B. u. sabini* on western slopes of Cascades and, rarely, descending to sea-level.

Authorities.—["Gray ruffed grouse," Johnson, Rep. Gov. W. T. 1884 (1885) 23.] Bendire, Life Hist. N. A. Birds, Vol. I. 1892, p. 64. D¹. D². J. E.

Specimens.—Prov. B.

LIKE the Partridge of the East, our Washington drummer prefers deciduous timber. On this account, therefore, it keeps largely to the bottom lands along river courses, and the deeper valleys of the mountains.

Appreciation of the Ruffed Grouse is about equally divided between the nature-lover and the sportsman. Be he gunner or poet there is none who can

withstand the charms of the October woods in which it lives, when the air is crisp and the fallen leaves are rustling smartly. The trees are not yet entirely stripped, but certain clusters of aspens have great windrows piled about their feet, and the carpet of the woods is everywhere pregnant with possibilities. The poet feels the overhush of autumn and the gunner the undercrush of leaves, but both alike are startled by the first wing-rush of the "Pheasant,"



CANADIAN RUFFED GROUSE.

as it bursts from cover and whirls away like a cyclone to the uttermost parts of the woods. Altho the Grouse knows how to rise silently on occasion, there is a bravado about the bird which leads it to give a saucy dare of deafening noise.

On the drumming log those marvelous wings which stir the blood like none others, may be heard again:

"Hearest thou that bird?

I listened, and from 'midst the depth of woods
 Heard the love signal of the Grouse that wears
 A sable ruff around his mottled neck:
 Partridge they call him by our northern streams
 And Pheasant by the Delaware. He beats
 'Gainst his barred sides his speckled wings, and makes

A sound like distant thunder;
 slow the strokes
 At first, then fast and faster,
 till at length
 They pass into a murmur,
 and are still."

The main purpose of this extraordinary music is well known: it is to attract the female and guide her to the tryst. It is not, however, certainly known whether the bird is monogamous. Bendire thinks he is. On the other hand, an observer once saw seven hen birds grouped about a strutting male. "And seven women shall take hold of one man in that day, saying, We will eat our own bread and wear our own apparel; only let us be called by thy name; take thou away our reproach."

Various theories have been advanced as to the real method of sound production in drumming. The reverberating sounds were long supposed to be due to the impact of the wings upon the breast. A very creditable imitation may be produced by a sound-winded man who pounds upon his lungs with



Taken in eastern Oregon.

Photo by A. W. Anthony.

NEST AND EGGS OF CANADIAN RUFFED GROUSE.

clenched fists. Others affirmed that the ictus was made by the contact of wings as they met over the back. Bendire says: "It is generally conceded now by most naturalists, including such well-known ornithologists as Brewster, Merriam and Henshaw, that the sound is produced by the outspread wings of the bird being suddenly brought downward against the air, without striking anything."

Another noisy surprise is in store for the person who comes upon a mother Partridge with a brood of tender chicks. With a great outcry the mother bird charges up in front of the intruder, or dashes into his face; then

stands before him with flashing eyes and ruffled feathers looking fierce enough to eat him up. Thus she holds the enemy at bay for one bewildering moment,—a precious moment, in which her tiny darlings are finding shelter. Then she collapses like a struck tent and vanishes in a trice. A diligent search may discover a chick under a fallen leaf, or between two pieces of bark, but no living man can find an entire brood in this way.

The Canadian Ruffed Grouse, or "Gray-tail," is of northern stock, well distributed thru the timbered foothills and mountain valleys of eastern Washington. It intergrades with



Taken near Spokane.

Photo by F. S. Merrill.

ON THE ALERT.

CANADIAN RUFFED GROUSE (BACKGROUND PAINTED OUT).

the following form thruout the higher valleys of the western slopes of the Cascades, and occasionally ventures to the very coast, especially northerly. Intermediate plumages are not rare, but specimens from any locality of the borderland are usually definitely referable to one form or the other. Thus of eleven specimens taken by Mr. Brown near Mt. Baker five were "grays," that is, Canadians, and five "reds," or Oregons, with one intermediate. These differences of plumage are so marked that it is easy to name the birds as they rise.

No. 234.

OREGON RUFFED GROUSE.

A. O. U. No. 300 c. **Bonasa umbellus sabini** (Dougl.).**Synonyms.**—"PHEASANT." BUSH PHEASANT. "PARTRIDGE." RUFFED GROUSE. DRUMMER. RED-TAIL.**Description.**—Similar to *B. u. togata*, but gray of upperparts persistent only as bordering of subterminal tail-band; ground-color of upperparts rich rusty brown; underparts more deeply tinged with buffy or buffy brown, markings heavier, more extensive, and with more of blackish; throat ochraceous or orange-tawny.**Recognition Marks.**—As in preceding, browner; tail always (?) rich rusty brown.**Nesting.**—Much as in preceding form. *Eggs* more warmly tinted.**General Range.**—Pacific Coast district from Humboldt County, California, north to British Columbia.**Range in Washington.**—Resident thruout western Washington, but more common in vicinity of streams, and in groves of the prairie counties.**Authorities.**—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Coues, Vol. II., pp. 182, 183.] *B. sabinii*, Baird, **Baird**, Rep. Pac. R. R. Surv. IX., 1858, p. 631. T. C&S. L. Rh. Kb. Ra. Kk. B. E.**Specimens.**—(U. of W.) Prov. B. E.

PERHAPS the most exquisite product of our somber western woods is this handsome Grouse with his plumage of warm browns and woodsy buffs, relieved by touches of white, and set off by the glossy black of neck ornaments, or ruffs. Nature has painted her favorite to match the mouldering logs of red fir, cross-hatched as they are by the infinite traceries of the under-forest. When he steps forth at the sound of your footstep into some woodland path, alert yet curious, with ruffs half-raised and tail partly opened, you feel as if the very beauty of nature had found concrete expression, and that the vision would fade again if you breathed too heavily.

If not pressed, the bird will presently hop up on some fallen log, the better to see and be seen; or else trip away satisfied into some mossy covert. Or it may take suddenly to wing, with a roar which you feel to be quite needless, especially when exaggerated by a series of grunts which must be partly derisive.

From the point of view of the sportsman this bird is not to be compared with the Ruffed Grouse of the Eastern States. Its cover is too abundant, and it does not take the discipline which has educated the wily

"partridge." It seldom allows the dog to come to a correct point, usually flushing into the nearest small tree, where it sits peeping and perking like an overgrown chicken, regarding now the dog and now the hunter. Pot-shooting the birds under these circumstances can hardly be called sport, but their fondness for dense thickets often makes it the only way in which they can be obtained.

In the latter part of February the mating season commences, and from that time until well into May the rolling drum-call of the cocks may be heard at any hour of the day and sometimes far into the night. Every cock has some particular fallen tree which he has chosen for his private drumming ground, and he very rarely resorts to another situation. A favorite log becomes worn in the course of a season, so that an experienced hunter may locate the trysting place in its owner's absence.

The motive of this singular performance is, of course, primarily sexual. It is the wooing call such as every male grouse indulges in one fashion or another; but there seems to be in this also a more poetic element. Its exhibition is not confined to springtime, but the desire seizes the bird at intervals thruout the year, and especially in the fall. The grouse drums for the same reason that other birds sing, simply to express his joy of life.

In executing this maneuver the bird stands to its full height and beats its wings swiftly downward towards its sides, in this manner rendering sounds which closely resemble the syllables *bump - bump - bump, bumperrrrr*. The wing-beats commence slowly but end in a rapid whirr, which not even the most speedy lens may exactly define. The sound carries to the distance of half a mile or more, but so subtle, or profound, is its character, that the ear can scarcely distinguish as between twenty yards and fifty.

It is only a lucky chance which discovers the female near the drumming log, altho this is the appointed meeting place. On the occasion of her near presence the male occupies the intervals of drumming by strutting up and down with extended plumage, and tail held turkey-wise. We cannot blame the admiration of the female, and no one begrudges a mortal the right to strut a little before *one*.

It is a moot point whether Robin Goodfellow is as faithful as he ought to be. The fact seems to be, however, that behavior varies greatly with individuals. Ordinarily the bird appears to mate but once in a season. During the period of incubation, the hen is left pretty much to her own devices, but even then the cock is not unlikely to be somewhere in the vicinity. When the chicks are out, it is the mother who has the care and training of them, but instances are on record where the male has appeared upon the scene in time of danger to make gallant defense of his offspring.

At the foot of a maple in some swampy thicket, or close beside a fallen log, the female scrapes a slight depression in the earth, lining it roughly with dead leaves and a few small twigs. In this she places eight or ten eggs, buff or faintly ruddy, sparingly spotted with pale brownish or buffy red. As she leaves the nest, she does so a-wing, causing the surrounding leaves to flutter carelessly over her eggs. If the eggs are



Taken near Tacoma.

Photo by the Author.

NEST AND EGGS OF OREGON RUFFED GROUSE.

molested, she will either desert outright or else break up the polluted clutch. If, however, she only suspects that her secret may be known, she is at great pains to cover up her treasures with leaves and trash each time she quits them.

In caring for the brood the mother bird exhibits the utmost solicitude,

fearlessly exposing her person, until she is assured that the babies are all safe. At such times she utters a whining sound, or adds to it a vocal undertone, *dzut dzut dzut dzut*, which is not unlike the chittering of a chipmunk or a Chickadee. The youngsters peep lustily, once the ban of silence has been removed, and if the bird-watcher lingers quietly, he may hear the motherly clucking which reassembles the brood.

The food of the Bush Pheasants consists largely of insects, worms, seeds, buds, green leaves, and berries. They are fond of the fruit of the Cascara, which they gather from the ground; and wild crab-apples are favorites in season. These last ripen about the middle of October, and from that time until the alders bud again these Grouse are often to be found in evergreen trees.

No. 235.

WHITE-TAILED PTARMIGAN.

A. O. U. No. 304. *Lagopus leucurus* Swains. & Rich.

Synonyms.—MOUNTAIN GROUSE. SNOW GROUSE. "FOOL HEN."

Description.—*Adults in full summer dress:* Head and neck all around, forebreast and upperparts, including scapulars, upper tail-coverts, and central pair of rectrices, white, mottled and barred with black, finely upon head and neck, broadly elsewhere, the black, in turn, except on breast, finely barred and vermiculated with ochraceous tawny or grayish brown; remaining plumage, including wings and tail (with exceptions noted) pure white; bill and nails black. *Adults in winter:* Entire plumage pure white. Specimens in summer plumage vary interminably both in the amount and intensity of the black and ochraceous or tawny, the coloration of the central pair of tail-feathers being apparently the last character assumed in this moult. *Young:* Above light brownish gray, or grayish brown, densely vermiculated with black, and with scattered irregular patches of the same; two outer quills partly white, four innermost ones entirely white, the rest dull grayish; tail-feathers mottled brownish like back; anterior and lateral lower parts dull buffy, irregularly barred, vermiculated and spotted with black; rest of lower parts plain dull buffy grayish white" (Ridgway). Length of adult: 13.00-14.00 (330.2-355.6); wing 7.00-7.25 (177.8-184.2); tail 3.50 (88.9).

Recognition Marks.—Little Hawk size; mottled black of upperparts, and pure white of wings, tail and underparts of summer plumage unmistakable.

Nesting.—*Nest:* a grass-lined depression, in heather-bed or on grassy slope near timber-line. *Eggs:* 8 or 10, sometimes 14, creamy buff or pale ruddy, speckled and round-spotted, rather sparingly, with burnt sienna. Av. size, 1.78 x 1.16 (45.2 x 29.5). *Season:* June, July; one or two broods.

General Range.—High mountains of Oregon and Washington, north to Alaska.

Range in Washington.—Central range and higher peaks of the Cascades and (probably) the Olympic Mountains.

Authorities.—["White-tailed ptarmigan," Johnson, Rep. Gov. W. T. 1884 (1885) 23.] **Bendire**, Life Hist. N. A. Birds, Vol. I., 1892, p. 83. T. Rh. D. E.

Specimens.—Prov. B. E.

AS the Bluebird mediates between earth and sky, so does the Ptarmigan between snow and heather. Its plumage, white in winter and mottled gray in summer, is an exact counterpart of its chosen surroundings; and its simple tastes are satisfied with the fare of browse, berries, and chance insects which is obtainable upon our highest mountains above the timber-line. Permanent



Taken on Mt. Rainier.

From a Photograph, Copyright, 1908, by W. L. Dawson.

THE SLUISKIN PTARMIGAN—BROADSIDE.

residence in the case of any species hints at antiquity, but as one studies these demure birds in their dwindling fastnesses of rock and ice, he cannot help thinking of that elder time when ice prevailed over all the landscape, and when these hardy Eskimos of the bird-world may have been the dominant species in Washington.

The processes of nature are so slow, however, that we shall never live to see the extermination of the Ptarmigan, unless the operation is unduly hastened by the unlawful demands made upon them by hungry campers. Altho likely to occur upon any ridge of rock or grass-covered slope above timber-line in the Cascade and Olympic Mountains, the local range of these birds is much restricted, and many isolated colonies have already been destroyed, especially those in the vicinity of mining camps.



Taken in Rainier National Park.

From a Photograph, Copyright, 1908, by W. L. Dawson.

THE CLOUD CAP.

MT. RAINIER FROM EAST PARADISE RIDGE.

Ptarmigans are usually unsuspicious and confiding to a degree unprecedented in the case of any other American bird. This is partly owing to the secluded character of their haunts, so that they have not learned the fear of men; and partly to the instinctive reliance which they place in their protective coloration. A sitting hen will not leave her nest until she is all but trampled on, and once disturbed, she will even allow herself to be lifted from the ground without resistance. The cock is usually more wary. Once, while encamped in

the Cascade Pass, I was working lazily over a sharp ridge, half covered with snow, when I heard a subdued croaking, or crooning, like a Clark Nutcracker note done small. Glancing ahead I saw a cock Ptarmigan standing breast-deep in heather and regarding me with a watchful eye. As I approached he ran out upon the snow-bank, cackling apprehensively, but he circled about so as to return to the edge of the timbered island which he had just quitted. Here a moment later I put up the female. She stepped out from the heather upon the snow with a disturbed cluck, but proved to be much more approachable than the male. I followed her about patiently as she skirted



Taken in Chelan County.

Photo by the Author.

"THE COCK SUBMITTED TO ONE SNAP."

the edge of the island, now going out upon the snow if pressed too closely, now returning to the heather if I retreated. In this way I secured three good photographs at six feet. The cock submitted to one snap at twenty-five feet,

but he was too nervous to stand long under fire; and he retreated across the snow by little runs until he had reached a heather patch a dozen rods further up. Here he lingered in a fever of unrest, torn by jealousy and fear, as I ogled his modest mate for an hour or more. Now and then he gave vent to his anxieties by a series of raucous little screams. But the hen made no reply, which under the circumstances I took to be



Taken on Mt. Rainier.

Photo by W. L. Romans.

A PATIENT SUBJECT.

not a little flattering. The contrast between the cock and the hen in appearance and behavior was quite striking. The male carried himself jauntily with perking head and, at times, erected tail. The hen moved quietly, and sat motionless as often as I forbore photographic persecution.

The bird called "The Sluiskin Ptarmigan" was a male, banished, I took it, while his mate was incubating.



*From a Photograph, Copyright, 1908, by
W. L. Dawson.*

THE SLUISKIN PTARMIGAN—THE WINK.

He was startled from a heather bed between Sluiskin Falls and the Stevens Glacier, on the flanks of Mount Rainier. The guileless fellow had no notion of flying at first, and as often as I did not press acquaintance fell to feeding on the tender roots of the False Heather. When the telephoto lens was replaced by the Heliar, and a closer view demanded, he sought to escape by scampering past me into the weeds. Failing in this, he retreated, somewhat sulkily, to the edge of the snow-bank and halted while the photographer remarked "Look pleasant, please" at four feet. But the bird could fly. Bless you, yes! So when the sitting was quite over, he first ran fifty feet, paused, then launched into the air with a rattling whirr, finishing with a sail on stiffened wing, which carried him quite out of sight.

At the close of the nesting season and before the autumnal moult, Ptarmigans sometimes become unaccountably wild. I have known them to fly with wild onteries at a hundred yards, and this repeatedly, so that there was no mistaking their terror. Yet it is practically certain that these particular birds had never seen man before, and in an earlier mood they might have submitted to handling. Their shrieks

upon such occasions are altogether out of keeping with their previous mild character, and we can only suppose that growing pains or something in their diet gets upon the nerves at this season.

The mother bird clucks to her brood like any old hen, and both birds

have a mellow, rolling note, which is not unlike Biddy's brooding cry. It is meant for menace, but its utterance only increases one's desire to pick the bird up and fondle it.

For a nesting site the female usually chooses a sloping, grass-covered hillside, or a stretch of gravelly soil half-covered by vegetation. In this she makes a considerable depression, lines it carefully with grass and twigs, with some feathers from her own breast, and deposits eggs, from six to ten, or even twelve, in number. These resemble the eggs of the Sooty Grouse (*Dendragapus obscurus fuliginosus*) much more than they do those of other species of Ptarmigan, since they are of a warm buffy or pale ruddy hue, dotted and spotted, but not extensively blotched, with reddish brown.

The time chosen for nesting depends largely upon the season and the relative amount of snow-fall, which is so variable in our mountains. Chicks are brought off by the 4th of July some years, and again not till August. Mr. C. C. Cornell is of opinion that the Ptarmigans on Mount Baker raise two broods in a season, and affirms that the first brood is



Photo taken July 6, 1908, by W. L. Dawson.

SLUISKIN FALLS.

taken in charge by the male while the female is incubating a second. If this be the case, it is not impossible that the families may unite later in the season. On the 30th of July I once encountered on the slopes of Mount Sahale a covey which appeared to have this double character. A number of young, apparently three or four weeks old, burst from cover like partridges, while downy chicks clamored at my feet. I stooped to pick up one of the fluff-balls, whereat the



Photo by A. Gordon Bowles, Jr.

PTARMIGANS ON ROCKY RIDGE.
FOUR BIRDS APPEAR IN THE PHOTOGRAPH.

mother bird charged in to my face, with such fury, indeed, that I was obliged to fend her off with my arm, and I released the chick forthwith for fear of mutual injury.

Late in September the White-tailed Ptarmigans begin to doff summer browns for a coat as white as the driven snow, from which the birds are distinguished alone by beady black eyes and bills almost as black.

The feathering of the toes also becomes more extensive; this provides these Grouse with snowshoes, which prove to be very useful articles in case of mountaineers who insist upon spending the winter where the snow is anywhere from ten to a hundred feet deep.

No. 236.

COLUMBIAN SHARP-TAILED GROUSE.

A. O. U. No. 308 a. *Pediocetes phasianellus columbianus* (Ord.).

Synonyms.—COMMON SHARP-TAILED GROUSE. PIN-TAILED GROUSE. "PRAIRIE CHICKEN."

Description.—*Adults:* Above chiefly buffy gray or pale brownish finely varied by irregular spots and bars of brownish black and lighter brownish; wing-coverts with rounded spots of white; wing-quills fuscous, spotted on the outer webs with whitish or tawny; the secondaries tipped with white and irregu-

larly barred with white, the inner ones changing to pattern of back; tail graduated, the two central pairs of feathers much like back, the remainder mottled on outer webs, white or grayish white on inner; below whitish as to base, or tinged with buffy anteriorly, the throat buff, usually immaculate, the remaining feathers usually with U- or V-shaped markings of dark brown, heaviest and sharpest on breast, least or none on belly; axillars and wing-linings pure white; legs grayish white. Iris light brown; bill chiefly dark horn-color; toes light horn-color above, darker below. *Young birds* are browner above, with sharp white shaft-lines, and whiter below with dark brown spots on breast, changing to streaks on sides. Length of adult: 18.00-20.00 (457.2-508); wing 9.00-10.00 (228.6-254); middle pair of tail-feathers 4.00-6.00 (101.6-152.4); shortest (lateral) tail-feathers 1.50 (38.1); tarsus 2.00 (50.8); bill .65 (16.5).

Recognition Marks.—Crow size; mottled grayish plumage; chiefly terrestrial habits; completely feathered tarsus; graduated tail.

Nesting.—*Nest*: a grass-lined depression under shelter of sage-bush, grass-clump, etc. *Eggs*: 10-15, buffy-olive or drab-colored, unmarked, or finely dotted with brown. Av. size, 1.70 x 1.24 (43.2 x 31.5). *Season*: c. May 1st; one brood.

General Range.—Northwestern United States from western edge of the Great Plains in Montana west to Cascade-Sierras, south to northern California, Nevada, and Utah, north thru British Columbia to central Alaska.

Range in Washington.—Upper Sonoran and Arid Transition life-zones in eastern portion of State; unknown west of the Cascades.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle: Coues, Vol. II. p. 180.] *Pediocates phasianellus*, Baird, **Baird**, Rep. Pac. R. R. Surv. IX. 1858, pp. 626, 627. T. C&S. D¹. D². Ss¹. Ss². J.

Specimens.—Prov. P¹.

"CHICKENS? No; I hav'n't seen a Prairie Chicken fur—Oh, I dunno when—several years anyhow. Oh, yes; there used to be a good many of 'em in thru here; that is, before them city sports came with their dogs and guns and cleaned 'em all out." Such an answer might be expected of the average East-side rancher anywhere from Walla Walla to the northern line, tho it would only be just to add that the farmer himself has helped himself pretty liberally in the early day when "chickens" were plentiful, and when every man accepted the bounty of nature without anxious thought for the morrow. The Sharp-tailed Grouse still lingers in certain less frequented regions, and some who know of local coveys may be inclined to scoff at these lines; but take my word for it: there is not one Sharp-tail in the State where there were fifty thirty years ago. We have no one to blame for it but ourselves either, for the bird is not excessively shy. It is hardy and adapts itself readily to changing conditions. Moreover, it thrives on the waste of the grain field, and is able to glean a fat living from barren acres which yield nothing otherwise unless it be for a band of all-devouring sheep.

The Columbian Sharp-tail is—or was—a fine game-bird. It lies well to a dog, and moves off at a pace which is a fair test of marksmanship. Moreover, its flesh is excellent eating, juicy and tender and in the best of condition just when the frosts are beginning to nip. Stringent protection for a term of years, followed by sane treatment in the annual shooting of the increase only, would assure to us the presence of a sturdy and valuable game bird for generations to come.

The economy and general appearance of the Sharp-tailed Grouse is much that of the Prairie Hen (*Tympanuchus americanus*), or "chicken," of the East, after which it was promptly named by the early settlers. In the early days it was partially migratory in habit, spreading out upon the sage-brush stretches and rye-grass plains in spring and summer, but resorting to the aspen groves and timbered draws in winter. As soon, however, as cultivation assured support in winter, the birds began to maintain their place in the open wheat-fields or visited the haystacks and the farm-yards. Tho chiefly terrestrial in habit, at the advent of cold weather these Grouse alight freely in trees and bushes, browsing upon the tender shoots or gleaning unfallen fruit, being especially partial to the rose-hips. In the Yakima country twenty-five years ago it was no uncommon sight to see a flock of these Grouse walking and fluttering about the barn and out-buildings, nor even to be aroused at early morning by the patter and scratch of pectinated feet upon the house-top. Of course this was the prompt signal for resurrecting the old musket,—so gracious is human hospitality.

Sharp-tailed Grouse have several cackling and calling notes, none more characteristic than the rattling, grunting cry with which they take to wing. When getting under way the body is rocked violently, as tho by alternating wing strokes. A series of such flaps is followed, if the way is clear, by a long sail on stiffened wings; and so powerful is the bird in flight that it will not infrequently distance a hawk or an unsophisticated owl. I have seen a Marsh Hawk dash repeatedly into a passing flock of Grouse, but never saw him catch one yet.

These Grouse are doubtfully monogamous, but their nesting is prepared for by an elaborate social function, which is thus described by Mr. Ernest E. Thompson^a: "After the disappearance of snow and the coming of warmer weather, the chickens meet every morning at gray dawn in companies of from six to twenty on some selected hillock or knoll and indulge in what is called 'the dance.' This performance I have often watched. At first, the birds may be seen standing about in ordinary attitudes, when suddenly one of them lowers its head, spreads out its wings nearly horizontally and its tail perpendicularly, distends its air sacs and erects its feathers, then rushes across the

a. Speaking of a closely allied form, *P. p. campestris*—The Birds of Manitoba, Proc. U. S. Nat'l Museum, Vol. XIII. (1890), p. 510.

'floor,' taking the shortest of steps, but stamping its feet so hard and rapidly that the sound is like that of a kettle drum; at the same time it utters a sort of bubbling crow, which seems to come from the air sacs, beats the air with its wings, and vibrates its tail so that it produces a low, rustling noise, and thus contrives at once to make as extraordinary a spectacle of itself and as much noise as possible.

"As soon as one commences all join in, rattling, stamping, drumming, crowing, and dancing together furiously; louder and louder the noise, faster and faster the dance becomes, until at last, as they madly whirl about, the birds are leaping over each other in their excitement. After a brief spell the energy of the dancers begins to abate, and shortly afterward they cease or stand and move about very quietly, until they are again started by one of their number 'leading off.'

"The space occupied by the dancers is from 50 to 100 feet across, and as it is returned to year after year, the grass is usually worn off and the ground trampled down hard and smooth. The whole performance reminds one so strongly of a Cree dance as to suggest the possibility of its being the prototype of the Indian exercises."

No. 237.

SAGE GROUSE.

A. O. U. No. 399. **Centrocercus urophasianus** (Bonap.).

Synonyms.—SAGE COCK. SAGE HEN. COCK OF THE PLAINS.

Description.—*Adult male*: Above mingled buffy and grayish, varied irregularly with black; many of the wing-feathers with central white streaks, the tertials bordered terminally with white; wing-quills grayish brown, sometimes mottled on outer webs with paler; chin and throat broadly mingled black and white, defined laterally by crescentic area of white; lower throat black, the feathers bordered more or less with grayish white; chest gray; belly black surrounded by white; lower tail-coverts black, broadly tipped with white; lining of wings white. "To describe the peculiar neck-feathering of the old cock more particularly: On each side is a patch of feathers, meeting in front, with extremely stiff bases, prolonged into hair-like filaments about 3.00 in length; with the wearing away of these feathers in the peculiar actions of the bird in pairing-time, their hard horny bases are left, forming 'fish-scales.' In front of these peculiar feathers is the naked tympanum, capable of enormous inflation under amatory excitement. Above them is a tuft of down-feathers, covered with a set of long soft filamentous plumes corresponding to the ruff of Bonasa. Many breast-feathers resemble the scaly ones of the neck, and are commonly found worn to a bristly 'thread-bare' state. Scaly bases of these feathers soiled white; thready

ends blackish; fluffy feathers snowy-white, like wool, the longer overlying filamentous plumes glossy black" (Cones). *Adult female*: Similar to male, but much smaller and without black of chin and throat; feathers of neck not strikingly peculiar. Length of cock: 24.00-30.00 (609.6-762); wing 12.00 (304.8); tail 11.00-13.00 (279.4-330.2); weight 4-8 pounds. Adult hen: length 21.00-23.00 (533.4-584.2); wing 10.00-11.00 (254-279.4); tail 7.00-9.00 (177.8-228.6); weight 3-5 pounds.

Recognition Marks.—Braut size; largest of American Grouse; sage-haunting habits.

Nesting.—*Nest*: a scantily lined depression in ground under sage-bush. *Eggs*: 6-15, usually 8 or 9, pale buffy-olive to olive-green, dotted and spotted with dark brown. The marking is of different degrees of intensity, is well distributed, and varies in size from a pin-head to a pea, tending to circular forms. Av. size, 2.20×1.54 (55.9 $\times$ 39.1). *Season*: April-May 10; one brood.

General Range.—Sage-brush plains of the western United States and southern portions of British Columbia, Alberta, and Assiniboia, south to New Mexico and Arizona.

Range in Washington.—Practically coextensive with that of sage-brush (especially *Artemisia tridentata*) in eastern Washington.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Cones, Vol. II., p. 180.] *Centrocercus urophasianus* Swains, **Baird**, Rep. Pac. R. R. Surv. IX., 1858, p. 625. T, C&S, D¹, D², Ss¹, Ss².

Specimens.—P. C. E.

AS bamboo to the Oriental, or as the cocoanut palm to the South Sea Islander, so is the sage bush to this Cock of the Plains. It not only provides him shelter of a sort, but food and probably drink as well. At least, from the fact that the Sage Cock is found at such distances from water, we are



Taken near Spokane.

Telephoto by W. H. Wright.

SAGE GROUSE HIDING.

forced to conclude that the dew-covered browse of the *Artemisia* must often serve the bird in lieu of water. As to food, this Grouse has so long depended upon the leaves and tender shoots of the sage brush and greasewood for subsistence, that it is incapable of digesting grain when it is offered. The bird's gizzard, unlike that of other grouse, is not a strong, muscular grinding-organ, but a membranous sac capable of great distension, but unequal to the task

of reducing seeds, grains, or even hard-shelled beetles. The bird's spring diet is varied by many kinds of tender herbage, and in summer it consumes quantities of crickets, grasshoppers and other insects, but sage is eaten at all seasons and forms its exclusive ration in winter.

In spite of this monotonous and bitter fare the flesh of the adult Sage Grouse is far from unpalatable, especially if speedily prepared; while birds of the year in the fall are as wholesome as those of any other species. In fact, much that has been written about "fishy" ducks and "sagey" grouse has been derived from specimens left about undrawn until the characteristic flavors of the intestinal contents have permeated the flesh,—obviously, an unfair test in case of a pronounced diet either of clams or wormwood.

Sage Grouse move about in coveys, family groups, in which the mother remains a central figure, until late autumn. At that season several coveys may unite to form a "pack," and the male birds are allowed to rejoin the company. Stories are told of bands numbering up to a thousand, but small flocks are the rule. These Grouse, like all others in America, with the partial exception of the Pinnated, are non-migratory; but they are mildly nomadic in their habits, moving about in the flocking season from one portion of their local range to another.

Altho far larger—males weigh five or six pounds, and eight-pound birds are of record—the Sage Grouse resembles the Sharp-tail in many ways. Like the latter it will crouch low upon the ground, or, especially if the passerby be on horse-back or in a wagon, will "freeze" beside a sage bush in hopes of escaping detection. When put to flight it has the same harsh rattle or cackle, increased in proportion to its size. It rises heavily with violent exertion of alternating wing-strokes, and after each repetition of such efforts, rests in long stiff sails. The birds lie well to a dog, or not, according to circumstances, and a flock is seldom found lying as close together as is the case with Sharp-tailed Grouse.

In the courting antics of this valiant son of the desert, Nature has indulged a fresh fancy. Indeed, it is to be suspected that the Dame takes a special delight in making some of the most staid and prosaic of her male progeny appear in a ridiculous light, when under the influence of the tender passion. This grizzled veteran of the wormwood does not express his sentiment with either dignity or grace. No; he first inflates the air sacs, which line his neck, until they assume alarming proportions, meeting in front and frequently engulfing his head; the tail with its spiny feathers is spread to the utmost and pointed skyward; then the gallant pitches forward and casts off for a belly-buster slide over the ground, not without much assistance of propulsive feet in approved "kid" fashion. As a result of this ridiculous dry-land swim, the feathers of the breast are worn off at the tips till only the quills protrude. These ragged quill-ends, in being forced over the earth, produce a mild roar

which passes for an aria by Caruso with the gray lady in the sage-box. La! but it is absurd! Do you suppose—now *do* you suppose we ever make such fools of ourselves?

In nesting, the female hides from the cock, as is the case with most of the grouse. A slight depression in the ground, barely or not at all lined with twigs and sage-leaves, serves for a cradle, with a sage bush for a canopy. The eggs are heavily colored, greenish gray or greenish drab as to ground with sharp dots and rounded spots of reddish brown or chocolate. Eight to fifteen is the number laid, but the smaller denomination represents the average size of fall flocks after the coyotes have taken toll.

Sage is a thing accursed in the eyes of all thrifty farmer folk, and he whose ambition it is to cause two blades of grass to grow where none grew before, must needs abolish the wormwood. With it goes the Sage Grouse, after the Turkey, the largest and most irreclaimable of the American Tetraonidae. Its days are numbered, and there is no use wasting sentiment in the face of million dollar irrigation projects. Fare ye well, or fare ye ill, gray mourner of the wilderness! We have troubles enough of our own.

No. 238.

MONGOLIAN PHEASANT.

Introduced. **Phasianus torquatus** Gmel.

Synonyms.—RING-NECKED PHEASANT. CHINESE PHEASANT. DENNY PHEASANT.

Description.—*Adult male*: Sides of head largely bare, with livid skin; top of head light greenish; short plumicorns dark green; throat and neck all around black, with rich metallic reflections; a *white cervical collar* nearly meeting in front; fore-neck and breast, well down, shining coppery red with golden and purplish reflections; sides rich fulvous with black spots; belly mostly blackish; above with indescribable intricacy of marking,—black, white, copper, fulvous, pale blue, viridian green, glaucous green, etc., etc. (we are not morally responsible for the coloring of this marvelous exotic); tail much lengthened, mostly greenish fulvous, edged with heliotrope-purple and cross-banded with black. *Adult female*: Much plainer, mostly brownish and without white collar; the upperparts more or less spotted and mottled with dusky; the underparts nearly plain buffy brown; the tail-feathers barred for their entire length, dusky and whitish on a mottled brownish ground. Adult male length 30.00 (762) or more, of which more than 16.00 (406.4) is tail.

Recognition Marks.—Size of domestic fowl. Long tail and white collar distinctive.

Nesting.—*Nest*: on the ground of dried leaves, grasses, etc., usually in grass tussock or under bush. *Eggs*: 8-15, yellowish, olive-drab, or bluish buff. Av. size, 1.61 x 1.31 (40.9 x 33.3). *Season*: April-July; two or three broods.

General Range.—China. Introduced in various localities of the United States. Well established in Washington, Oregon, and southern British Columbia.

Range in Washington.—Well established on Puget Sound, especially at lower levels, and successfully introduced into various localities of eastern Washington.

Authorities.—[“Mongolian Pheasant (introduced),” Johnson, Rep. Gov. W. T., 1884 (1885), p. 23.] **Keck**, Wilson Bulletin, No. 17, June 1904, p. 35. B. E.

Specimens.—(U. of W.) Prov. BN. E.

THE happiest event in the history of game protection in the Pacific Northwest, or indeed in the entire country, was the introduction, in 1880 and 1881, of the China Pheasant by Judge O. N. Denny, of Oregon, then Consul-General to Shanghai. Happiest, we maintain, not alone because the bird draws the fire from our harassed and over-hunted native birds, but because it bids fair to furnish a staple article of food such as normally constituted people crave, and such as the Many, as distinguished from the favored Few, have a right to demand.

The move was well considered on the part of Judge Denny, he having been long impressed with the high reputation which the bird bore in its native land, both as a table bird and as an economic factor in the subjugation of insect pests. He, therefore, at great expense, arranged an importation, first of seventy birds, which perished thru lack of proper care before liberation, and later of thirty birds, which were successfully liberated near Peterson's Butte in the Willamette Valley of Oregon. The Pheasants thus secured immediately established themselves in the Willamette country, and from this importation of 1881 most of our western stock has sprung.

There are many factors which conspire to make the Mongolian Pheasant the favorite as it will be the dominant game bird of the West. In the first place, the male bird is a vision of loveliness, gorgeous in coloring beyond the ability of a mere word-painter to depict, occupying in this regard the same relation to other gallinaceous birds that our Wood Duck does to other water-fowl. A cock Pheasant brought to bag is both a dinner and a picture, a feast and a trophy.

Then, and chiefly, the China Pheasant is a good rustler. Evolved in his native land under conditions of the most strenuous competition, the pheasant race has developed both adaptability and endurance, staying qualities which give the bird an assured position in any situation remotely similar to that afforded in China. Under protection, Pheasants avail themselves of all the privileges, ranging freely across farms and cultivated areas, finding sufficient cover in neglected fence-rows or wayside thickets, and becoming so bold as to disregard the passer-by, and even to venture into the farmyard to feed with the domestic fowls. Under persecution the bird as quickly develops wariness

and cunning, and is able, under necessity, to maintain a thrifty existence in the forests and uncleared river valleys, in complete independence of men. It is even able, and this is a vital point, to quickly discriminate between open and close season, and to resume the warier life under the behest of a single day's discipline.

As a game bird, also, the China Pheasant ranks high. Its flesh is above the average, and its pursuit involves all the elements of sagacity, skill, and endurance, which constitute upland shooting sport. The bird lies well to a dog—that is, when cornered—but if he has a running chance, the dog must win his point. Pheasants are cunning sneaks and swift runners, and the cocks will sometimes travel at top speed for half a mile before admitting defeat and crouching for the wing test. The bird leaps into the air with a sudden cry, pauses for a fraction of a second to get his course, then away on vigorous wings.

The Pheasant is usually thus pursued with gun and dog, after the fashion observed in case of all native grouse, and that moment of indecision which always comes after the bird is up is the favorable moment for the gunner. But it is no mean test of skill to stop a Pheasant in mid-flight when the hunt is *en battue*, after the English and Continental fashion.

Stubble fields and open situations are the preferred range of the Ring-necks, but they are quite at home in the jungle. They are especially to be found at the borders of clearings, where their haunting presence is likely to be resented by the pioneer who is trying to carve a garden out of a forest. Some damage they undoubtedly do, just as chickens would, but it is to be suspected that those who complain most bitterly of the "devastations" wrought by this fowl are seeking cover for their practice, all too frequent, of potting these luscious birds out of season.

Fecundity is another trait of this hardy fowl. The birds are polygamous, and the cock is prepared to fight for the possession of the largest possible harem. The females raise two or three broods in a season, but not content with this, the amorous cocks seek alliance with native and domestic species. Hybrids formed by the crossing of China Pheasants and Sooty Grouse are not infrequent, and the introduction of wild blood into the farm-yard results in interesting and not unprofitable forms.

Cock Pheasants crow somewhat after the fashion of Chanticleer, producing a sort of double explosive sound, *squawk-squawk*, accompanied by a vigorous clapping of wings. Mr. Victor Savings called my attention to the fact that in the spring of the year, when any unusual noise is made the nearest cock Pheasant crows instantly. Mr. Savings, Sr., was engaged in blasting out stumps and I was able to confirm Victor's observations, for every time the Hercules powder "let go" with a dull boom, some Pheasant crowed

No. 239.

CALIFORNIA CLAPPER RAIL.

A. O. U. No. 210. *Rallus obsoletus* Ridgw.

Description.—*Adult*: Above olive-gray or grayish olive, broadly, but usually not sharply, striped with blackish brown; eyelids, short superciliary line, chin, and upper throat, whitish; fore-neck, chest, and breast, uniform deep cinnamon, the sides of the neck dull grayish cinnamon; sides, flanks, and axillars, dark brown, narrowly bordered with white, the white, in turn, with dusky. *Downy young*: Uniform glossy black. Length of adult: 17.50-18.00 (444.5-457.2); wing 6.63 (168.4); bill 2.40 (61); tarsus 2.18 (55.4).

Recognition Marks.—Small Crow size; olive-gray above, reddish below; the only large Rail in range.

Nesting.—*Nest*: a raised platform of dried grasses or tules, supported by grass tussock in swamp. *Eggs*: 6-15, buffy white, or paler brownish buff, sparingly dotted and spotted with reddish brown and purplish gray. Av. size, 1.75 x 1.24 (44.5 x 31.5). *Season*: May; one brood.

General Range.—"Salt marshes of the Pacific Coast, from Washington (?) to Lower California."

Range in Washington.—Gray's Harbor. Also lay reports from vicinity of Tacoma and Seattle.

Authority.—Hubbard, *Zoe*, Vol. III., July 1892, p. 142.

WE are not certain whether this large marsh-prowler is a resident with us or whether our meager records are due only to the visits of ambitious explorers, the vanguard of that mighty army of those who, like ourselves, feel the lure of the North. This species has its center of abundance in the salt marshes which adjoin San Francisco Bay. "They are either tame or exceedingly stupid birds—I believe the latter, for they may be captured alive during the early spring and late fall, as they trust to protective coloring and do not try to escape until too late. During the breeding season they are somewhat more shy, but even then it is nearly impossible to flush them because they skulk or dive rather than fly, and refuse to desert the nest. About the middle of April they commence to make a nest of marsh grass on a tussock, and from that time on are devoted to it. Eight or nine eggs are laid, and incubation lasts nineteen to twenty-three days. As is well known, certain varieties of marsh birds build several nests, using but one. The 'dummy' sometimes serves as a shelter for the adult male; sometimes the making of it seems to have been a mere pastime; and, occasionally, as in the case of the clapper rail, it forms a convenient platform or nursery on which the young can scramble for a sun-bath when weary with their first swimming-lessons. These unused nests are commonly placed close to the one occupied by the brood and closely resemble it" (Mrs. Wheelock)^a.

a. Birds of California, by Irene Grosvenor Wheelock; pp. xxviii + 578; Chicago, A. C. McClurg & Co., 1904.

No. 240.

VIRGINIA RAIL.

A. O. U. No. 212. *Rallus virginianus* Linn.

Description.—*Adult*: Above brownish black, the feathers broadly striped laterally with lighter browns (wood-brown, bistre, and olive-brown), and shading into burnt umber on wing-coverts and edges of quills; forehead with numerous, enlarged, glossy, black shafts without attendant vanes; a light line over eye in front, and a dusky line thru eye; lower eyelid white; sides of head ashy gray; chin and upper throat white; lower throat and breast cinnamon-rufous (Mars brown), growing paler medially and posteriorly; belly, flanks, and lining of wings brownish dusky or blackish, crossed by narrow white bars, lighter, or sometimes almost unmarked fulvous, centrally and on thighs; bill red, darker above. *Immature* birds show blackish more extensively on underparts. *Downy young*: Uniform glossy black. Length 8.00-10.50 (203.2-266.7); wing 4.15 (105.4); tail 2.00 (50.8); bill 1.50 (38.1); tarsus 1.33 (33.8); middle toe and claw 1.78 (45.2).

Recognition Marks.—Robin size (to appearance); marsh-prowling habits. The long reddish bill and rufous coloration serve to distinguish this bird from the following species.

Nesting.—*Nest*: of sedge and grasses in tussock of swamp. *Eggs*: 6-12, pale buffy or creamy white (of noticeably lighter coloration than those of the succeeding species); spotted and dotted with reddish brown and obscure lilac. Av. size, 1.25 x .95 (31.8 x 24.1). *Season*: May 10-June 1; one brood.

General Range.—North America from the British Provinces south to Guatemala and Cuba.

Range in Washington.—Regular but not common summer resident in swamps thruout the State.

Authorities.—Newberry, Rep. Pac. R. R. Surv. VI., Pt. IV., 1857, p. 96. C&S. Rh. D¹, D², B. E.

Specimens.—U. of W. Prov. B. E.

GIVEN an oasis of water of, say, two acres extent, in a pasture desert of barren green; crowd a company of willows into one end; add a half acre of bogs crowned with rose bushes; then a little space of clear water; then a jungle of cat-tails at the other end; surround the whole with a thirty-foot border of sedges and coarse grasses cropped close on the desert side, and you have an ideal home for the Virginia Rail and his kind. Poke about carefully in the edge of the rose-bog and you will soon start him, a sly reddish brown bird with a red eye and a longish beak. See him some ten feet away standing at the edge of cover, all alert, one foot uplifted and with claws curled down; or when he plants it gingerly, he alternately perks and lowers his head, as tho divided in his mind between darting away and facing it out with you. Simul-

taneously he cocks his tail forward and relaxes it nervously. If you succeed in looking sufficiently disinterested, he will snatch a slug hastily and watch you furtively with a blood-red eye, to note whether you approve of such actions. If you pass all the tests of good behavior during the first five minutes, the gentle bird will relax his vigilance and show you how he can walk over half-submerged vegetation without sinking very deep himself, or if in the passage from bog to bog he comes to a space of clear brown water, he will swim as lightly as a duck, but with that odd bobbing motion peculiar to his race. A single false motion, however, will send him scuttling off thru the plant-stems and out of sight in a twinkling, cackling in alarm and dudgeon.

But splash you around never so bravely in hip-boots, or wait you never so patiently, the feeling grows upon you that you are an outsider, so far as the more intimate interests of the swamp are concerned. There is much trafficking in the sedges, which is not meant for human eyes, and the revealing of the life of any Rail is much like the natural history of a shooting star,—one flash, one history. But the sly birds are brave in voice. As the male Rail wanders about uneasily in early April searching for a mate he cries, "*Keg, keggy, keggy, keggy,*" in tones which convey an impression of a much larger and fiercer bird. The anxiety of a female for her young is betrayed by a mournful *ki-i*, or by short phrases of creaking notes. If the young are in hiding, a low cluck of reassurance will bring them scurrying to find their mother.

A hummock of grass in a freshwater marsh is always selected as a nesting place. In this the bird scratches a considerable depression, which she lines carefully with dried grasses. The bird is a close sitter, but flies when flushed, where you would expect her to have better success in sneaking. If the eggs are handled in her absence, the owner is likely to destroy them upon her return; and Mr. Bowles has a set which he rescued nearly in time, with only one of its eggs pierced clear thru by a thrust of the bird's long beak.

The eggs, averaging fewer in



Taken in Tacoma.

Photo by the Authors.

NEST AND EGGS OF VIRGINIA RAIL.

number than the Sora's, may certainly be distinguished from them by their lighter creamy, or grayish white tones, as well as by the clearer red of their markings.

No. 241.

SORA RAIL.

A. O. U. No. 214. *Porzana carolina* (Linn.).

Synonyms.—CAROLINA RAIL. SORA. SOREE.

Description.—*Adult*: Above olive-brown varied by black and white in spots and stripes on back and scapulars,—the black broad and central, the white narrow and marginal; region about base of bill, chin, throat, and median crown-stripe black; cheeks behind, sides of throat, and breast bluish ash; below olive-brown to dusky, sharply barred with white, whitening on middle of belly; under tail-coverts tawny or tawny-washed; wing-quills fuscous; edge of wing and of first primary white; bill yellow, darkening on tip of upper mandible. *Immature*: Without black on head and neck; chin whitish; throat and breast washed with light brown. *Downy young*: Sooty black, the down interspersed sparingly with longer glossy black hairs; a tuft of bright orange bristles on throat,—stiff and inclined forward; and a bright red excrescence at base of upper mandible. Length 8.00-9.50 (203.2-241.3); wing 4.20 (106.7); tail 2.00 (50.8); bill .83 (21.1); tarsus 1.36 (34.5); middle toe and claw 1.85 (47).

Recognition Marks.—Chewink size, but stouter in appearance; marsh-skulking habits; short yellowish bill.

Nesting.—*Nest*: a raised platform of grasses and sedge, usually placed centrally in grass tussock of swamp. *Eggs*: 8-15, dull buffy or ochraceous-buff (and so darker than eggs of *Rallus virginianus*); spotted and dotted with dark brown and with purplish shell-markings. Av. size, 1.24 x .90 (31.5 x 22.9). *Season*: c. May 20; one brood.

General Range.—Temperate North America, breeding chiefly northward, but less commonly on the Pacific Coast. Casually north to southern Greenland. South to the West Indies and northern South America.

Range in Washington.—Not common summer resident and migrant both sides of the Cascade Mountains.

Authorities.—Rhoads, Auk, X, Jan. 93, p. 17. T. Rh. D¹. D². B. E.

Specimens.—(U. of W.) Prov. P¹. C. E?

"AS thin as a rail" does not refer to the Lincoln variety of split trees, but to this bird and its congeners. The birds are bilaterally compressed in order to enable them to slip readily between the close-set stalks of vegetation. And this they do with almost incredible rapidity, and without leaving a wake of confusion by which they may be traced.

Like the Clapper Rail of California the Sora rises to a dog; or if caught feeding inshore some little way from his watery fastnesses, he flits over the tops of the reeds, drops down suddenly, and loses himself immediately in the maze. It is idle to follow him when alarmed, for he will not rise again save under exceptional circumstances. Immense numbers of these birds are slaughtered yearly, especially along the Atlantic Coast. They have this at least to recommend them,—that they are easy practice for juvenile hunters. They afford less meat, however, than so many English Sparrows, and quahms of conscience make poor sauce.

Tho' rightly counted shy, the Sora possesses one trait which brings it into frequent notice—curiosity. Often when I have been lying in a boat waiting for ducks, among the aquatic plants, some little distance off shore and removed from the usual haunts of the Sora, I have heard sundry *kecks* half apprehensive, half quizzical, followed by the plashing of light feet as a troop of the little Rails worked their way out and surrounded me, under pretense, indeed, of searching for food, but being all too plainly prompted by inquisitiveness. Dr. Howard Jones tells of similar experiences: "I have had them come up to me and peck my gum boots, and play with the gun barrel as a bantam rooster does when teased."

A slight platform of rushes or a shallow basket of woven cat-tail leaves and grasses serves for a nest. A site is chosen anywhere in the swamp, but usually in a rather open situation. Sometimes a tussock of grass is used, and the growing blades curl over to conceal this anchored ark of bulrushes. The Sora is a little more prolific than her cousin, the Virginia, a dozen eggs being commonly found, and fourteen and fifteen not infrequently. In the latter case the eggs are apt to be in two layers. The ochraceous cast of the ground color is unmistakable, and the spots are both more numerous and of a duller brown than those of *R. virginianus*.

Nothing could be at once more interesting and more comical than the appearance of a young Sora just out of the shell. He is, to begin with, a ball of down as black as jet, and he has a most ridiculous tuft of orange chin whiskers. Add to this a bright red protuberance at the base of the upper mandible and an air of defiance, and you have a very clown. And such precocity! Once, in a secluded spot, I came upon a nestful at the critical time. Hearing my distant footsteps most of the brood had taken to their new-found heels, leaving two luckless wights *in ovo*. At my approach one more prison door flew open. The absurd fluff-ball rolled out, shook itself, grasped the situation, promptly tumbled over the side of the nest, and started to swim across a six-foot pool to safety.

No. 242.

CALIFORNIA BLACK RAIL.

A. O. U. No. 216.1. *Creciscus coturniculus* Ridgw.

Description.—*Adult*: Head, breast, and upper belly blackish slate, darker on crown; a large patch on hind-neck dark chestnut; remaining plumage brownish black; bill black. *Immature*: Similar to adult but lighter on breast, whitening on throat, shaded with chestnut on hind-crown. *Downy young*: "Entirely bluish black." Length 5.00-6.00 (127-152.4); wing 2.70 (68.6); tail 1.23 (31.2); bill .57 (1.45); tarsus .78 (19.8); middle toe and claw .95 (24.1).

Recognition Marks.—Warbler size, but appearing Sparrow size. Marsh-haunting habits; diminutive size and dark coloration distinctive.

Nesting.—Not known to breed in Washington, but probably does so. *Nest*: of the finer grasses lining a cup-shaped depression in ground of marsh. *Eggs*: 9-10, white or creamy white, sparingly sprinkled with dots of reddish brown, more heavily about the larger end. Av. size, 1.00 x .80 (25.4 x 20.3).

General Range.—Pacific Coast district north to Washington.

Range in Washington.—Summer resident, probably on both sides of Cascades. A lay record from Sprague.

Authority.—*Porzana jamaicensis*, Bowles, Auk, Vol. XXIII., April 1906, p. 141.

"ABOUT as difficult to observe as a field mouse," said Mr. Chapman in speaking of the eastern bird. The comparison is very modest, for most of us have seen field mice. This bird is so tiny as contrasted with the sedge forests of its home, ample shelter for Coots and Bitterns, that we feel sure Dame Nature must have laughed as she set this "little Partridge" in the grass and bade him hide, as he valued his life.

The type specimen of *C. coturniculus* was taken on the Farrallones, October 13, 1859, and this for years remained unique. Only recently has sufficient material come to hand to enable Mr. Brewster to point out the probability that this Farrallone specimen was a young bird, distinguished by an unusual amount of white spotting on the back, and to show that the Pacific Coast birds are differentiated from eastern birds on other grounds^a.

The Washington record is based upon three specimens seen by Mr. Bowles in the South Tacoma swamp on November 10, 1900. Each bird was flushed once, flying low over the grass for but a short distance before plumping down out of sight. In spite of the fact that he had with him an excellent bird-dog, it was impossible to flush any of them a second time. The flight Mr. Bowles describes as being something between that of a wren and a

a. The Auk, Vol XXIV., April, 1907, p. 205-210.

sparrow; and they are so small that the observer scarcely thinks of them as being rails until they are gone.

It is significant that most, perhaps all, of the Pacific Coast records for this bird have been made in the late fall or early winter. This does not necessarily argue a northern breeding ground for the species, but only that the birds relax their vigilance in part at this season. During the nesting season they simply cannot be flushed; and the discovery of a nest is a lucky accident, such as has not yet befallen any one on the western coast.

In Jamaica, where the type form has been studied more closely than elsewhere, an informant of Mr. Gosse told him that several were accidentally killed by the negroes at work, as, in the presence of danger, the bird is so foolish as to hide its head, cock up its rump, and imagine itself safe. Another authority, a Mr. March, likened its cry to the syllables *chi-chi-cro-croo-croo* "several times repeated in sharp, high-toned notes, so as to be audible to a considerable distance."

No. 243.

AMERICAN COOT.

A. O. U. No. 221. **Fulica americana** Gmel.

Synonyms.—MUD HEN. CROW DUCK. POUL D'EAU.

Description.—*Adult*: General color blackish slate, bluer tinted above, browner tinted below; head and neck pure black; lower scapulars and interscapulars tinged with olive-green; edge of wing, exterior margin of first primary, tips of secondaries, and lateral and posterior tail-coverts white; bill ivory-white, a dark brown spot near the tip of each mandible; frontal shield brownish red; tarsi and feet greenish; toes margined by scalloped flaps. *Adult in winter*: Plumage lightened below by whitish tips of feathers; frontal shield reduced in size. *Immature*: Similar, but more extensively tipped with whitish; frontal shield still further reduced; red spots on bill wanting; bill obscure flesh-color or with olive tinge. *Downy young*: Blackish head and neck decorated with orange-colored bristly filaments, remaining upperparts with similar but paler filaments; bill orange-red, the upper mandible black-tipped. Length about 15.00 (38.1); wing 7.35 (186.7); tail 2.20 (55.9); bill (from beginning of frontal shield) 1.40 (35.6); tarsus 2.10 (53.3); middle toe and claw 3.10 (78.7).

Recognition Marks.—Crow size, to appearance; substantially uniform coloration (slaty black); white bill; lobate feet.

Nesting.—*Nest*: an elevated platform of dried cat-tail leaves and grasses in heavy growth of marsh, or surrounded by water. *Eggs*: 6-15, usually about 10, pale buffy or cream color, moderately sprinkled with rounded spots and dots of burnt umber, sepia or black. Av. size, 1.88 x 1.32 (47.8 x 33.5). *Season*: May 10-June 20; one brood.

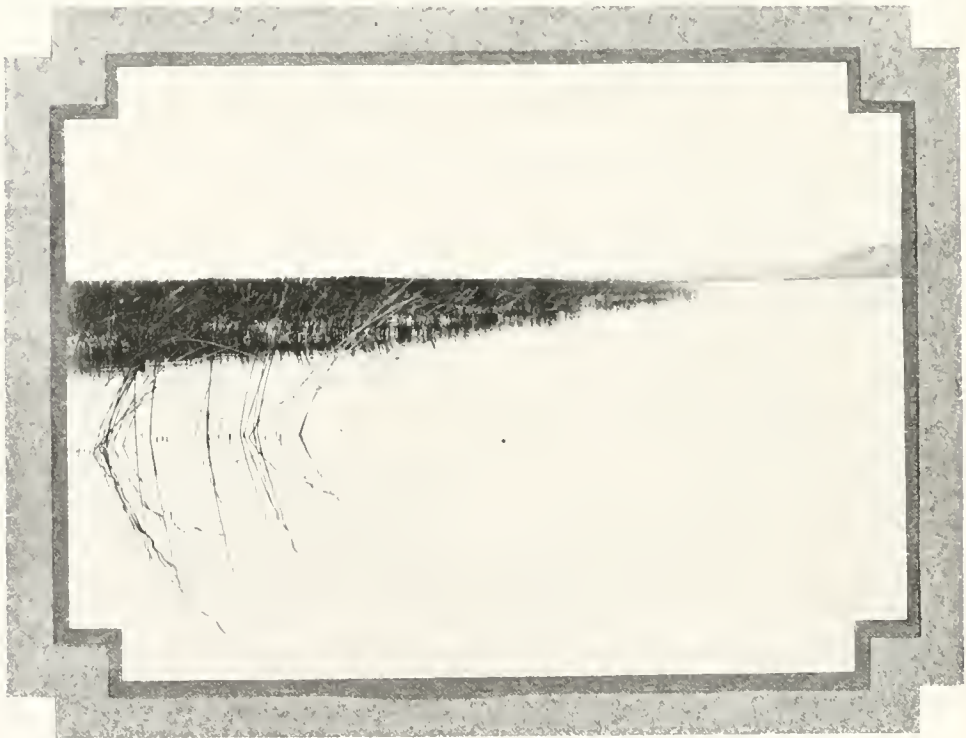
General Range.—North America from Greenland and Alaska southward to the West Indies and Veragua.

Range in Washington.—Common summer resident and migrant both sides of the Cascade Mountains; sparingly resident in winter on Puget Sound.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Coues, Vol. II, p. 194.] **Cooper and Suckley**, Rep. Pac. R. R. Surv. 1860, p. 247. T. C&S. Rh. D¹. Kb. Kk. J. B. E.

Specimens.—(U. of W.) Prov. P¹. B. E.

WHEN a canvas canoe propelled by a double-bladed paddle grows big upon the horizon and then brushes noisily against the weedy outpost of some tule swamp, an ominous hush falls over the scene, a silence broken only by the rustling of the arum tops. You saw birds from the distance, but every man Jack of them has fled. The reeds will tell no tales. Presently a Grebe relieves the tension by snorting—that is the word—then dives suddenly to quench his ill-timed mirth; next a leaden figure steals from behind a distant clump of reeds and glances this way and that apprehensively. It is only a man



Taken on Moses Lake.

Photo by the Author.

MID REEDY HAUNTS OF COOT AND HERN.

in a boat—perhaps—she *did* want to visit that snail-bed before the sun got too high. So she advances, not without many misgiving hitches of the head, across an intervening stretch of bare water, and disappears behind a screen of reeds. The passage successfully accomplished, another Mud Hen and another ventures forth, the last one sniffing scornfully over the alleged danger. Confidence restored, the invaded precincts begin to re-echo to their wonted sounds of life, splashing and noise of pursuit, and mellow notes of several sorts. Only sit quiet and your stranger presence will soon be accepted as matter of course.

Where unmolested, Mud Hens fill about as large a place in the economy of a well-conducted swamp as do chickens in a barnyard. Especially in the breeding season, the sound of their gulping call, *pulque pulque pulque pulque*, is the prevailing note of the swamp. These notes are rendered with the head close to the water, and seem to afford a prodigious relief to the bird's feelings. The Coot, on fatigue duty, is a very prosy-looking fowl, for the bird ordinarily sits half submerged, with lowered wings and tail both sloping into and under the water; but the Coot on dress parade is a very different-looking fellow, albeit his uniform is the same. When the ladies are looking, he sits high in the water; the wing-tips are pointed obliquely upward; the tail is held vertically or tilted forward; and two white patches of feathers, one on each side of the tail, are flashed into view and carried prominently.

Courtship is largely a matter of pursuit. In this both pursuer and pursued rise, or only half rise, from the water, with much floundering and splashing. And they proceed only a rod or two when both fall back exhausted, the female usually well in advance. This is mere gallantry on the part of the male, and exaggerated pretense on the part of both. When the male is in earnest, the pursuit is carried on under water as well as above it. Much time is spent by enamored couples in simply gazing into each other's eyes. A pair will face each other, beak to beak, with necks stretched out full length upon the water, and paddle about for minutes together in fascinated circles. The hinder parts, meanwhile, are carried high like those of a swan. This *vis-à-vis* pose is also a menace on the part of rivals, and is the inevitable preliminary of any cock fight. In this the birds appear to depend upon nail more than upon tooth, for they lean back upon the water, bracing with their wings, behind, and kick at each other most absurdly. After such an episode, which the female, as likely as not, has interrupted, all the interested parties float about with ruffled feathers and outstretched heads laid low, each apparently in a sort of trance of self-satisfaction.

From a somewhat careful study of these birds during the breeding season, I am inclined to think them polygamous. This is evidenced by the readiness with which other cocks are disposed to butt in upon any chase in progress, quite after the manner of the domestic fowl.

Coots are highly gregarious at all times. Not only do they nest in loose

colonies, but in migration they move in large flocks; and when resting during migrations, they often sit huddled together closely. As we reclined on the bank of the Columbia near Two Rivers early one April morning, we were permitted to witness the exhibition of an interesting trait common to several species of migrant water-fowl. The current of the river at this point (nearly opposite Homely Island) is pretty swift and it breaks into bad rapids below; but the birds, having recently come up thru the great gap, would settle on the water a mile or so above us and float down stream—apparently for the sheer fun of the thing. In this way an endless procession of Scaups, Mallards, Teal, Shovellers, and Canvas-backs, was hurried along before our admiring gaze. Most of the birds rose upon reaching the rapids, to re-align well up stream; but some, Butterballs, Mergansers, and such, preferred the exhilaration of the rapids themselves. Glancing upstream, we noted what appeared to be a log, turning lazily with the shifting of the current. Judge of our surprise when, at close quarters, the log resolved itself into a compact mass of Coots, a hundred or so at least. They made a pretty sight with their new spring suits and their glistening ivory bills, each crowding his neighbor like boys on a bob-sled. As they swept past we could almost believe that the leader shouted, "Isn't this sport!" "Great!" we answered. Royal sport it certainly was, and the birds took their ducking in the rapids with the best of humor, altho the company was badly broken up by the pounding of the waters. We found them half an



Taken in Douglas County.

Photo by the Author.

BIRD TRACKS.

THE COOT DID NOT "TAKE" WELL (SLATE AGAINST A GREEN BACKGROUND), BUT IT MAY BE DESCRIBED AT THE LEFT EXECUTING THE LAST KICK, THE WHITE PATCH FORMED BY THE TIPS OF THE SECONDARIES SHOWING PLAINLY.

hour later preening their feathers on a gravelly shoal and discussing, doubtless, their thrilling experience.

Every one is familiar with the shuffling manner in which a Coot rises from the water, floundering and kicking to get up steam; then lumbering off at a low height only to splash down again at what it supposes a safe distance. Under the spell of persecution the birds learn to get up more nimbly, and



Taken in Douglas County.

Photo by the Author.

A HATFUL OF SPECKLED EGGS.

once under way prove to be not ungraceful flyers. In flight they carry their legs at full length behind them, and seem to use them quite cleverly as a rudder, to supply the deficiencies of the abbreviated tail.

Youthful slayers of "mud-hens" there will always be, but it is fortunate that the creatures have not yet been taken seriously as game birds hereabouts, as they have East and South, where the legitimate objects of the chase are

nearly exhausted. By all means let us take ourselves in hand in sufficient season to avoid both the humiliating necessity of falling back on mud-hens for sport, and of trying to reconcile our palates to the unquestionably rank flesh which this bird furnishes.

The Coot puts a hatful of speckled eggs on a bulky heap of broken sedges or tules. This accumulation may be placed either on dry land near some waterway, or in various depths of water in the weedy or reedy margins of a lake. Not infrequently nests are built on the water and moored to standing



Taken in Douglas County.

Photo by the Author.

HALF A HATFUL.

reeds, after the fashion of Grebes,—with this difference, however, that the Coot under such circumstances always chooses dried weed-stalks, or crumpled bulrush stems for nesting material, so that the buoyancy of the submerged portion will lift the surface of the structure high and dry above the water.

It is not mere chance that has led us to consider the Coots and the Rails immediately after the Grouse. There are many points of resemblance between the *Galline* and the *Paludicolæ* both in structure and habit; and we follow

those who hold them to be much more closely related than, for example, the *Limicola* and the *Gallina*. We should doubtless have clearer insight into the phylogenetic history of the Coot, if we were able to interpret the meaning of the chick's downy plumage. As is well known, the young of any animal repeats in the successive stages of its growth the developmental history of its race. Bearing this fact in mind, a brief description of a baby Coot will not be without interest: General color black, the down of body plumage everywhere interspersed with longer hair-like feathers, the terminal or exposed portion of these pale orange on upperparts, intensifying to bright orange-red around chin, sides of face, and back of head, forming together with their black bases, now exposed, an absurd tonsure; short feathers of lores and ring of minute feathers about eyes still redder orange; top of head bare, forehead, except central line and space over eyes, livid purple, changing on crown to pale red; bald area modified by tiny rows of starting feathers; bill black at tip with a speck of white on top, thence to base passing thru four shades of red, pale vermilion or Saturn red, coral, light maroon, and purplish maroon; underparts modified to dull gray by whitish tips of projecting hairs; feet bluish gray. Surely the remote ancestors of the now plebian Coots must have been gay birds!



Photo by the Author.

A BABY COOT.

No. 244.

WHOOPING CRANE.

A. O. U. No. 204. *Grus americana* (Linn.).

Synonyms.—WHITE CRANE. GREAT WHITE CRANE. AMERICAN CRANE.

Description.—*Adult*: Plumage pure white, the wing-quills, primary coverts, and alula black; top of head, lores and cheeks bare, dull red, covered with a thin growth of short black hair,—the hair mixing more or less with white feathers on hind nape; bill dusky green; feet and legs black. *Immature*: Similar to adult, but head not bare; plumage, especially on back, more or less overlaid with ochraceous. Length 52.00 (1320.8); extent 90.00 (2286); wing 24.00 (609.6); tail 11.00 (279.4); bill 5.50 (139.7); tarsus 11.50 (292.1); middle toe and claw 5.40 (137.2).

Recognition Marks.—Giant size; long neck; long stout black tarsi; pure white coloration.

Nesting.—*Nest:* of grasses, on ground in marsh. *Eggs:* 2 or 3, pale olive or light drab, spotted and blotched with reddish brown and with obscure purplish gray shell-markings. Av. size, 4.00 x 2.50 (101.6 x 63.5).

General Range.—"Interior of North America from the Fur Countries to Florida, Texas, and Mexico, and from Ohio to Colorado. Formerly on the Atlantic Coast, at least casually, to New England" (A. O. U. Check List, 2nd Ed.). Is believed to be seeking refuge of late in unfrequented regions west of the Rockies.

Range in Washington.—Reported as summer resident in the Big Bend country (western plateau of Douglas County) and as migrant in Yakima County.

Authorities.—Dawson, Auk, Vol. XXV, Oct. 1908, p. 484.

IT would overtax the patience of those who believe that there is no bird but a dead bird, if we reported the Whooping Crane as a citizen of Washington solely on the strength of a flock observed by the author in Yakima County (May 2, 1908) and studied under binoculars at a range of *five miles*. But there is corroborative testimony from ranchers in both Yakima and Douglas Counties. A young farmer, whose attention I called to the flock as it rose slowly against the brown background of the Ahtanum Range, assured me that his father had killed one of three White Cranes some four or five years previous, and that it stood as high as his head when held up. Several ranchers in the Big Bend country testify that great white cranes come in spring and light in their stubble fields. They are familiar with the Sandhill Crane, and unite in declaring that these birds are white and that they stand higher than a man's head. Mr. LeRoy Benson assures me that several have been shot and eaten in the neighborhood of Moses Coulee, where his brother-in-law once winged a specimen and pursued it for half a day. I am thus explicit because there is no account of the occurrence of this now rare species west of the Rocky Mountains, save some uncertain records from southern Oregon. It would appear probable that these majestic birds are being driven by persecution from their former range on the Great Plains, and that they are seeking asylum with us. If so they should be as rigidly protected as buffaloes under similar circumstances. Spread the word that the Whooping Crane is *not to be killed*, save to the irreparable detriment of the race—*our* race, as well as that of the birds.

No. 245.

LITTLE BROWN CRANE.

A. O. U. No. 205. *Grus canadensis* (Linn.).

Description.—*Adult*: Plumage slaty gray to brownish, more or less washed, especially on back and scapulars, with ochraceous or rusty,—this rusty sometimes abruptly confined to scattered single feathers; quills, alula and primary coverts blackish; top of head to below eye bare, dull red, skin minutely warty and with some short, bristly, black hairs; feet and legs black. *Immature*: Head entirely feathered; plumage brown rather than plumbeous, extensively washed with rusty. Length about 35.00 (889); wing 18.50 (469.9); tail 7.50 (190.5); bill 3.60 (91.4); depth at base .77 (19.6); tarsus 7.50 (190.5); middle toe and claw 3.25 (82.6).

Recognition Marks.—Eagle size; slaty gray or brownish color; crane proportions of bill, neck and tarsus; smaller than the next species.

Nesting.—Does not breed in Washington. Like that of next species. *Eggs*: smaller. Av. Size 3.66 x 2.28 (93 x 57.9).

General Range.—Arctic and subarctic America, breeding from the Fur Countries and Alaska to the Arctic Coast, migrating south in winter into the western United States.

Range in Washington.—Common spring and fall migrant thruout the State.

Authorities.—Chapman, Bull. Am. Museum Nat'l Hist. Vol III. No. I. (1890), p. 131.

Specimens.—E?

THERE is no certain way of distinguishing these birds in flight from their larger relatives, *G. mexicana*. We only know that the bulk of the cranes which pass north during the spring migrations belong to this species, for it alone occurs thruout the tundras of Alaska in summer. During the seasonal movements no attention is paid to water-courses, and a pair seen at Dungeness on a stormy day, the 18th of April, had just topped the Olympic Mountains.

No. 246.

SANDHILL CRANE.

A. O. U. No. 206. *Grus mexicana* (Müll.).

Synonyms.—SOUTHERN SANDHILL CRANE. BROWN CRANE.

Description.—Exactly like preceding species, but larger. Length about 45.00 (1143); wing 22.00 (558.8); tail 8.00 (203.2); bill 5.50 (139.7); depth at base 1.05 (26.7); tarsus 10.25 (260.4); middle toe and claw 4.00 (101.6).

Recognition Marks.—Eagle size; slaty gray or brownish color; crane pro-

portions of bill, neck, and tarsus; considerably larger than the preceding species.

Nesting.—*Nest*: a platform of roots, reeds, weed-stalks, etc., raised slightly above water or mud of swamp. *Eggs*: 2, grayish olive or drab, spotted and blotched distinctly and obscurely with reddish brown. Av. size 4.00 x 2.45 (101.6 x 62.2). *Season*: c. June 1st; one brood.

General Range.—Southern half of North America; rare near the Atlantic Coast, except in Georgia and Florida.

Range in Washington.—Common migrant and not common summer resident both sides of the Cascades;—decreasing in numbers as breeding range is settled.

Authorities.—*Grus canadensis*, Temm. **Baird**, Rep. Pac. R. R. Surv. 1858. 656. (T). C&S. 1st. Rh. D¹. D². J. B. E.

Specimens.—(U. of W.) Prov.

If the pioneer West were to choose a bird symbol, none could be more fitting than the Sandhill Crane. Like the buffalo, and the Indian (at his savage best), the crane stands for that life of the wilderness which the white man may obliterate, indeed, but cannot subdue. He is the typical child of the desert, and between him and civilization there is a gulf fixed, a gulf which shot-guns and reclamation projects have done much to widen.

The trouble began, of course, away back when it was decreed that his flesh was "kosher"—and not only clean but sapid withal, "much resembling that of the Swan in flavor," as Nuttall observes. (Fancy using Swan's flesh as a basis of comparison! Truly we have made some progress in the past century.) "In the autumn and winter," Dr. Newberry said, "it [the Sandhill Crane] is abundant on the prairies of California, and is always for sale in the markets of San Francisco, where it is highly esteemed as an article of food." Well, it may be true, but that is why the Sandhill Crane has become a tradition in states where it formerly abounded, and a bundle of nerves in most places where it still maintains a foothold.

Alert, wary, and sagacious the Sandhill Crane always was, for even the hand of the Red-man was against him. These qualities have attained their highest development since the advent of the hungry Whites: so that a study of these birds is no longer classed as natural history, but only as morbid psychology.

The case is not so bad on the East-side, where in certain sections, notably the Horse Heaven country in Benton and Klickitat Counties, the birds still maintain themselves in considerable numbers. In spring, at least, they feed upon the highlands until ten o'clock in the morning; then, assembling into companies and platoons, they proceed to a lonely spot on the Columbia River, where, if undisturbed, they drink and splash and croak for hours at a stretch, some lingering indeed into the night.

In flight these Cranes flap, with laborious majesty, being heavy upon the wing. They move in single file with an old male in the lead, or else flank him on either side, forming thus great V's or U's. In starting, they leap to wing with a great effort, and require a number of widening circles in which to get fairly under way.

In the spring these gracefully ungainly birds indulge in curious antics of courtship. The male bows with outstretched wings and nearly touches the ground with his beak in the extremity of his devotion. The female returns the bow with respect quite as profound, and then they indulge an absurd minuet, swaying, dancing, leaping, and executing high kicks with an entrancing degree of awkwardness. There is no privacy about this phase of courtship, and twenty birds at once may join the giddy whirl which seals the fate of so many young hearts.

Perhaps it was a young bird I once saw, in August, adventuring to wade at the edge of the Yakima River. The bed of the stream was covered with rounded stones, among which the young Crane made poor shift. Once he stumbled outright and fell souse into the water; after which he made off with very uncranelike language on his mandibles. On the other hand I have seen Cranes alight in fir-trees on Puget Sound, and manage it quite nicely. There is reason to believe that arboreal life plays a larger and larger part in the stealthy domestic economy of birds on the West-side.

Prior to leaving the breeding grounds for the winter season, the Cranes are said to assemble for a stately promenade, which is the "swell" function of the year. When the clan is fully assembled, and after much preliminary sociability, the great company takes to wing and rises in majestic circles. These spirals are continued until a considerable height is attained with a great ado of sonorous croaking, a solemn leave-taking of the happy scenes of youth, after which the birds move southward.

Sandhill Cranes are to be found, not only in the bunch-grass hills and sage-covered uplands, but in mountain meadows of both the Cascade and Olympic Mountains, and upon the lesser prairies which dot the western forest.

Their food consists of grasshoppers, crickets, beetles, lizards, snakes, and young sage-rats, supplemented in season by some of the hardier berries. It requires but a moment's reflection to see that the birds are highly useful. Indeed, Nelson tells us that the natives at the mouth of the Yukon raise the young of the related species, *G. canadensis*, and keep them about camp because of their usefulness in keeping down vermin.

No. 247.

AMERICAN BITTERN.

A. O. U. No. 190. *Botaurus lentiginosus* (Montag.).**Synonyms.**—BOG-BULL. STAKE-DRIVER. THUNDER-PUMP. INDIAN HEN.

Description.—*Adult*: General color ochraceous or ochraceous-buff; darker, brownish, on back, the crown and upper back washed with blackish, the neck obscurely streaked with buffy and brown; the back and wings finely mottled, brownish, fuscous and ochraceous, becoming grayer marginally on wing-coverts; wing-quills and their coverts slaty; inner primaries and the secondaries tipped with ochraceous-rufous; a glossy, black or blackish stripe on side of neck anteriorly, continued to bill by indistinct, brownish line; chin and upper throat white; belly and crissum unmarked buffy; remaining underparts buffy or whitish, marked with large stripes of mottled ochraceous and dusky; bill brownish black on ridge of culmen, pale yellow on sides and below; feet and legs yellowish green. Very variable in size. Length 23.00-34.00 (584.2-863.6); wing 11.13 (282.7); tail 4.35 (110.5); bill 3.00 (76.2); tarsus 3.60 (91.4); middle toe and claw 3.98 (101.1).

Recognition Marks.—Brant size; ochraceous coloration; heavily streaked below; secretive, swamp-loving ways; heavy flight; "pumping" and "stake-driving" notes.

Nesting.—*Nest*: on the ground in swamps, or on dry swamp islands, a mere depression with scant lining of grasses, etc. *Eggs*: 3-5, olive-drab or olive-buff, unmarked. Av. size, 1.90 x 1.44 (48.3 x 36.6). *Season*: c. June 1st; one brood.

General Range.—Temperate North America south to Guatemala, Cuba, Jamaica, and Bermuda; occasional in British Islands.

Range in Washington.—Regular but not common summer resident and migrant in suitable localities throuth the State.

Authorities.—Baird, Rep. Pac. R. R. Surv. IX, 1858, p. 675. C&S. L. Kk. J. B. E.

Specimens.—(U. of W.) Prov. B. E?

THE records of the bog-bull in Washington are somewhat meager. Suckley records a specimen from Fort Steilacoom; and Bowles notes it as a rare but regular migrant at Tacoma. I have myself seen it only at Brook Lake, in Douglas County, where it unquestionably breeds in the extensive marshes bordering Crab Creek. Specimens are occasionally brought into town by hunters, who persist in shooting strange creatures at sight—for no better reason than that they are strange. For all that the Bittern is so large to appearance, it is a light-weight, a mere mass of skin and feathers, not so heavy as some ducks. A light charge of fine shot will bring it down; but if it is only wounded, beware of that sharp beak, which shoots out like lightning, and strikes the eye of dog or master with deadly precision.

This curious fowl is at home in the fastnesses of the swamp. Here

he skulks and feeds quietly by day; but as twilight approaches, he becomes much more active, and stirs about among the reeds hunting for crayfish and frogs, or wading with deliberate step in search of water insects and minnows. If the fishing is poor he may venture up into the meadows in search of moles and mice. When suddenly flushed, the bird makes off with a low frightened *quawk*, on heavy noiseless wings; but if he has a moment's warning, and a ghost of a show at concealment, the bird stretches, instead, to an enormous height, holding the long bill vertically, and becomes rigid. In such a position it requires the closest scrutiny to distinguish the bird from the surrounding reeds. Even in the open the bird will pose as a stake or a weed, and often quite successfully, relaxing or flying only when the danger is past. When at rest and unsuspecting, as in the heart of the swamp, the Bittern allows his feathers to droop like a rudely thatched roof, and he himself looks not unlike a deserted hut, fit emblem of the melancholy morass.

It is not, however, upon his beauty nor upon his weight that the Bittern's reputation rests, but upon his wonderful voice. The moonlight serenade which this ardent lover accords his mistress is one of the most outlandish performances in nature. Take an air-tight hogshead and immerse it suddenly in water with the bung-hole down; then allow the air to escape in great gurgles, say a caskful at a time, and you will get but a faint idea of the terrifying, earth-shaking power of the "Thunder-pump" at close range. *Umph-ta-googh, umph-ta-googh*, groans this absurd wooer, and the swamp quakes with apprehension. The case is serious, for the bird accompanies the cry with a motion which suggests the miseries of the Scriptural whale, and each successive Jonah has a long way to go before reaching fresh air. Maria likes the noise, of course, and,—well, love *is* like seasickness, at certain stages.

The birds also indulge in another note not less strange, but somewhat less startling,—that of a stake smitten by a hammer. *Whack-a-whack, whack-a-whack*, goes the bird, and the dullest imagination can picture the stake sinking deeper into the mud with every stroke.

No. 248.

GREAT BLUE HERON.

A. O. U. No. 194. *Ardea herodias* Linn.

Synonym.—BLUE CRANE.

Description.—*Adult*: Crown, sides of head, and throat white; occiput and top of head on sides glossy black, the feathers elongated into an occipital crest; neck pale purplish brown; a mesial stripe in front black, white and ochraceous; feathers of the side of the neck in front much lengthened, whitish and purplish brown; breast and belly broadly streaked with black and white in about equal

proportions; thighs cinnamon rufous; lower tail-coverts white; above nearly uniform slaty blue; the scapulars lanceolate, sometimes varied with bluish white; black shoulder tufts of plumulaceous feathers arching over bend of folded wing, and continuous with black on sides of the breast; wing-quills, lining of the wings, and sides bright plumbeous; lores blue; upper mandible yellowish-olive, blackening on ridge; lower mandible yellow; feet and legs black. The occipital crest of the male contains two much elongated, filamentous, deciduous feathers during the breeding season. *Immature*: Similar, but top of head entirely black; without specially colored or lengthened feathers on neck, sides of breast or scapulars; upperparts inclined to fuscous; underparts with slaty and ochraceous in addition to black and white; feathers on bend of wing and thighs lighter, or vinaceous-rufous. *Young in first plumage*: Brownish-fuscous above, streaked and spotted with buffy and whitish, narrowly on head and neck; below white, streaked with fuscous and buffy. Juvenile plumages vary interminably within these general limits, but the bird is unmistakable. Length 42.00-50.00 (1066.8-1270); extent about 70.00 (1930.4); wing 18.00-20.00 (457.2-508); tail 8.25 (209.6); bill 5.00-6.00 (127-152.4); tarsus about 7.00 (177.8); middle toe and claw 5.00 (127).

Recognition Marks.—Eagle size; great size and bluish cast of plumage unmistakable.

Nesting.—*Nest*, a bunch or platform of sticks placed high in trees or, rarely, on cliffs. *Eggs*, 3 or 4, pale blue. Av. size 2.50 x 1.50 (63.5 x 38.1). *Season*: April (West-side), May (East-side); one brood.

General Range.—North America from the Arctic regions southward to the West Indies and northern South America. Bermudas; Galapagos.

Range in Washington.—Common resident on Puget Sound and its estuaries, possibly less numerous in winter; not common summer resident and migrant east of the Cascades.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Coes, Vol. II., 189.] Newberry, Rep. Pac. R. R. Surv. VI., Pt. IV., 1857, p. 97. T. C&S. L., Rh. Kb. Kk. J.

Specimens.—(U. of W.) Prov. P. C. BN. E.

AS a picturesque feature of the landscape, or oftener, the water-scape, the Heron has no rival. Whether standing motionless upon the flats, with bills elevated or depressed according as men or fish are the objects of current moment, or whether flapping slowly across the scene, they lend just that touch of sedate life which the artistic eye requires. The Japanese have nowhere shown clearer credentials of authority in art than in their handling of the heron motif in decorative work. When the birds descend, it is as tho Heaven had responded to the mute incense of Fujiyama and gave gifts to men. When the birds fly, it is because the folly of men has provoked the gods, and Jimmu Tenno frowns from the clouds. And when the birds stand placid by a placid pool, what more fitting symbol of the ancient Nippon where tomorrow was like yesterday.

The Great Blue Heron is, with us, the largest of its kind; and while

not exactly graceful on the one hand, nor majestic on the other, it presents that peculiar combination of the two which we are pleased to call picturesque. While standing knee-deep in the water of some pond or stream awaiting its customary prey of minnows or frogs, it may remain for an hour as motionless as a bronze statue; then with a movement like lightning the head is drawn back and suddenly shot downward, and a wriggling fish is transfixed on the spear-like beak. A deft toss of the head puts the fish up and transfers it to the inside, and the bird moves with quiet, measured step to another station, or else rises heavily, with slow flaps, into the air. In full flight the Heron stretches its legs to the fullest extent behind; and the neck, especially when the bird is sailing, is carried like the letter S or Z, so that the lower part is brought parallel to the long bill, and the bird looks like a strato-cumulus cloud floating in space.

Besides frequenting inland lakes and waterways, the Herons patrol the tide-flats thruout the length of our thousand-mile shore-line. Their best hours are on the rising tide when the young flounders and stone-rollers come scuttling in; and their patience is so untiring that they will fish, if need be, far into the night. At high tide they take a turn in-shore, or else foregather on some deserted wharf. The lines of piling which support fish-traps are also favorite stations, and they stand along these unsocial pedestals like pillar saints of old. On a windy day it is interesting to see these long-legged creatures trying to make connection with their narrow perches as they alight. Facing the wind, some will fly past until their dangling legs touch the top of the pile, and then allow the wind to right them; while others thrust the feet well forward and critically observe the moment of contact, after which they struggle into position with great flappings. In spite of this apparent awkwardness, they can maintain themselves on no larger a footing than a taut rope; and I have seen them, on Lake Erie, stand on the edge of a fish-net, and, reaching down to the water some two feet below, select an underweight whitefish.

During the breeding season these large birds are gregarious. We have been unable to get any information of East-side heronries, and it is possible that the birds which frequent the Palouse and Big Bend country nest upon the ground; but on Puget Sound they nest high in forest trees where their haunts are not easily discovered. One such heronry existed formerly near Tacoma, being situated in a dense growth of cedar trees about a mile from the Sound. There were about sixty pairs of birds in this colony, and as one looked up from the dense tangle of undergrowth, the sight of so many great nests high up in the tall trees was a very impressive one. From one spot Mr. Bowles counted thirty-nine nests, as many as five nests being visible in a single tree, and these placed at heights varying from seventy-five to one hundred and fifty feet from the ground.

Since the nests in this mild climate contain eggs by the 1st of April, a visit should be paid to a heronry about the second or third week in May, if one would experience the most striking sensations. In the absence of the old birds, the youngsters, awkward, scrawny, ill-favored little brutes that they are, spend most of their time squabbling and trying to push



Taken in California.

Photo by H. T. Bohlman and W. L. Finley.

A TREETOP COLONY.

each other from the nest. Now and then one succeeds in sending a brother down the long abyss, but oftener the pursued one escapes along a branch, or, if he falls, catches on a limb below, and scrambles to safety, tooth and toe-nail.

But however scattered the young may be, the approach of the parent bird is a signal for all to gather. Upon alighting, the old bird first indulges a pensive moment, like a cow which is expecting another order of grass sent up from the proventriculum, after which she suddenly jabs her bill down the neck of the nearest squawker and dispenses sweet nourishment from her secret store. This she does with each child in turn till all are fed.

Whenever the old birds are about, the young keep up a loud cackling, not unlike that of Guinea hens, but less shrill and of immensely greater volume. The parents, too, make an astonishing amount of noise, roaring at times like caged lions. This bellowing of the Heron, as rendered at home or as produced when frightened at close quarters, is, without exaggera-

tion, the most soul-emptying succession of expletives in the North American bird language.

But all this insight into the domestic economy of the Heron must be obtained *incog*. Once you are recognized in the undergrowth below as a dreaded human, a great hush falls upon the colony. The anxious parents shrink till every feather seems glued to their persons full length, and if possible they slink away. The clamoring youngsters, standing full height in their nests, at a signal from an adult, turn to stone. After this they sink down by a movement as insensible as that of the hands of a clock.

No one claims that this Heron is "game," but the fact remains that thoughtless people with guns, not sportsmen, of course, seem to find his towering bulk irresistible, and have succeeded for the most part in driving his not unfriendly presence beyond the limits of rifle range. Why cannot someone invent an automatic soaring target, as big as a barn door, stuffed with tin cans, chicken feathers and a bottle of red ink, which when hit with a bullet would fall to earth with a crash like the walls of Jericho, and so satisfy at trifling cost this peculiar lust of lead-throwing? The stateliness of the Heron is too vital a part of our western landscape to be so wantonly sacrificed.



Taken in California.

Photo by Finley and Bohلمان.

A "FROZEN" HERON.

No. 249.

FANNIN'S HERON.

A. O. U. No. 194 a. *Ardea herodias fannini* Chapman.**Synonym.**—NORTHWEST COAST HERON.**Description.**—*Adults*: Similar to *A. herodias* but of darker coloration, with shorter tarsus, and averaging smaller; upperparts bluish slaty black instead of slaty blue; tibiae said to be more extensively feathered. Length: 40.00-45.00 (1016-1143); wing 17.50 (444.5); tarsus 5.50 (128.3).**Recognition Marks.**—As in preceding; darker.**Nesting.**—Not peculiar.**General Range.**—Northwest Coast district from the Straits of San Juan de Fuca and (possibly) Gray's Harbor north to Queen Charlotte Islands and west coast of British Columbia.**Range in Washington.**—As above, transitional form resident along northwest coast-line from Port Townsend to Gray's Harbor.**Authorities.**—No valid publication. B.(?) E.(?).**Specimens.**—Prov. E.(?).

THIS more darkly colored and somewhat smaller bird has been described from the regions of maximum rainfall here in the Pacific Northwest, and the Queen Charlotte Island group is assigned as the type locality. In the nature of the case it is impossible to draw a hard and fast line of separation between this and the interior form. On theory the bird should begin to differentiate as the rainfall increases. This would affect specimens from the entire Puget Sound region, and more especially birds from Gray's Harbor and the coastal districts. Whether this gradual deepening of color and decrease of size is really traceable could be determined only by a large series of specimens. Such a series, I hold flatly, it would be a crime to secure, because of the higher esthetic interests presented in this bird; and I make no apology, therefore, for stating an unsolved problem.

In note-book usage we call all resident Herons from Olympia, westward and northward, Fannin's, just as we call Crows found along shore, Northwests. That they are chiefly resident thruout this region and northward is well known, and it is the condition concomitant which permits the display of variation.

No. 250.

AMERICAN EGRET.

A. O. U. No. 196. *Herodias egretta* (Gmel.).

Synonyms.—WHITE EGRET. GREAT WHITE EGRET. CALIFORNIA WHITE EGRET. WESTERN EGRET. WHITE HERON. CALIFORNIA WHITE HERON. "WHITE CRANE."

Description.—*Adult in breeding plumage:* Entire plumage pure white; from the interscapular region originates a train of from forty to fifty elongated feathers, "aigrettes," with enlarged and stiffened shafts, and decomposed filamentous webs, which reach from eight to twelve inches beyond the tail; lores orange; bill yellow; legs and feet black. *Adults after the breeding season and immature:* Without elongated plumes on the back. Length (not counting plumes) 36.00-42.00 (914.4-1066.8); wing 15.00 (381); tail 6.75 (171.5); bill 4.70 (119.4); tarsus 6.00 (152.4); middle toe and claw 5.40 (137.2).

Recognition Marks.—Eagle size; pure white plumage; black legs and feet; heron habits; "aigrette" train.

Nesting.—Not certainly known to have bred in Washington. *Nest:* a mere platform of sticks in bushes near or over water. *Eggs,* 3-5, dull blue. *Av. size,* 2.28 x 1.60 (57.9 x 40.6).

General Range.—"Temperate and tropical America, from New Jersey, Minnesota and Oregon south to Patagonia; casually on the Atlantic Coast to Nova Scotia."

Range in Washington.—Formerly probably summer visitor at close of breeding season.

Authorities.—*Ardea occidentalis*, Newberry, Rep. Pac. R. R. Surv., Vol. VI., Pt. IV., 1857, p. 97.

A SINGLE line in an ancient governmental quarto is our sole authority for the inclusion of this magnificent and once abundant Heron among the birds of Washington. But its former occurrence serves to point a moral very much needed, and to adorn a tale, which if trite to some ears, ought to make the ears of certain others tingle.

Know then, that the "aigrette" of fashionable millinery is solely the product of this and allied species of Herons; and that in their pursuit, at the behest of thoughtless women, depraved men, called plume-hunters, have reduced to the solitude of a few impenetrable swamps in the Everglades, this snow-white splendor which was once abundant from Florida to Oregon.

The peculiar cruelty of this war of extermination lies in the fact that in order to secure the "aigrettes," which are to nod and dance on some lady's bonnet, the bird which owns them must be shot *during the nesting season*. The magnificent train of feathers is provided only at this time

of year, as a bride is granted her best robes for the wedding day and the honeymoon; and if the butchers, whom the feather-merchants hire, were to wait until the young birds were raised, the wedding garments of the parents would either be worn threadbare in service, or else cast aside. Therefore, since it must be done, as our gentle ladies have decreed, the only way is to visit a colony during the breeding season, shoot all the old birds (who will not of course desert their young), snatch out their nuptial plumes, and leave their carcasses to putrify, while the starving children call down from the tree-tops to the ears that hear not. Thus a single plume-hunter has killed hundreds of Egrets in a day, and in the palmy days of the "industry," certain gangs were able to kill tens of thousands in a single season.

Of course this slaughter is prohibited by law in the United States, but the mischief is nearly all accomplished so far as our own Egrets are concerned. Besides that, the inducements held out to the plume-hunters by the criminal dealers are very large. It is estimated that a villain named Cuthbert cleaned up thirty-five hundred dollars as the result of three days' successful law-breaking in a Florida swamp. And this sort of thing will continue just as long as thoughtless or spiritless women will submit to being imposed upon by unscrupulous dealers, in the name of a false and man-made god, called Fashion.

If this were a dead issue we could let the Egret go; but there is no appeasing this lustful god, whose belly is a Jew's purse. South America, Africa, the islands of the sea, are being ransacked and ravished by the emissaries of the feather-merchants. The Egrets are done for; but now, forsooth, "paradise aigrettes" are demanded, and that these may be supplied, out-of-the-way places, which civilization will one day require for the highest uses, are being desolated for all time. It is not merely that incalculable suffering is being caused to innocent life, but that we are spending the birth-right of our own and our children's future, which makes this slaughter for millinery purposes an economic *crime*.

No. 251.

BLACK-CROWNED NIGHT HERON.

A. O. U. No. 202. *Nycticorax nycticorax nævius* (Bodd.).

Synonyms.—QUA-BIRD. QUAWK. NIGHT SQUAWK.

Description.—*Adult in breeding plumage:* Extreme forehead and line over eye white; entire underparts white,—pure on chin and throat, elsewhere delicately tinged with light ashy gray or lilaceous; crown, nape, and scapular-mantle (in-

cluding back and interscapular region) lustrous greenish black; the occipital crest with several narrow, much-elongated, cylindrical, pure white plumes; remaining upperparts ashy- or smoky-gray; edge of wing white; bill black; lores greenish; irides red; legs yellow. *Immature*: Above fuscous, with central stripes, or centro-terminal wedge-shaped spots of white and buffy; green-tinged on crown and back, or not, according to age; below and on sides of head and neck white heavily streaked with fuscous. Length 23.00-26.00 (58.4-66.4); wing 12.50 (317.5); tail 4.75 (120.6); bill 3.00 (76.2); tarsus 3.30 (83.8); middle toe and claw 3.45 (87.6).

Recognition Marks.—Brant size; greenish black crown and mantle of adult contrasting with ashy gray; general streakiness of young.

Nesting.—*Nest*: a platform of sticks, usually placed high in trees, but occasionally in low bushes or even on the ground. *Eggs*, 4-6, pale, dull blue. Av. size, 2.00 x 1.45 (50.8 x 36.8). *Season*: May; one brood.

General Range.—America from Ontario and Manitoba southward to the Falkland Islands, including part of the West Indies.

Range in Washington.—Not common summer resident and migrant east of the Cascade Mountains, chiefly in Douglas County; of rare occurrence but possibly resident on Puget Sound.

Authorities.—Keck, Wilson Bulletin, No. 47, June, 1904, p. 34. T. C&S. L. Kk.

Specimens.—(U. of W.) C.

TRUE to their name, the Black-crowned Night Herons fly and hunt chiefly by night. On this account and because of their throaty notes, they have ever been the objects of superstitious dread on the part of savages; and the sounds which they make are not exactly comforting to the ears of white men, save those of the hardened ornithologist. The well-known cry may sometimes be allowed to pass as *quawk* (never "*qua*"), but usually it is jerked out with emphasis or ill-nature, and sounds more like *waark*, or *waark*. Harmless as the monosyllable may appear when uttered singly, and when divested of its ghostly suggestiveness, the din raised by a Heron rookery is said to be mighty and discordant beyond words.

As the nesting season imposes greater obligations upon the parents they hunt by day as well as by night, being found sometimes singly but oftener in pairs, moving from place to place with laggard wings beating in stately syncopation.

This bird may be seen to advantage about the undisturbed lakes of the arid transition zone in eastern Washington. Here it moves about sluggishly at the edge of a pool, or else, posting on a commanding block of basalt, one will stand sentinel by the hour, head withdrawn between shoulders like an adjutant in a great coat, unobserving (apparently), unmindful of the passage of time, a somber gray figure which embodies better than anything else the dear desolation of the wilderness.



Photo by Finley and Bohlman.

YOUNG BLACK-CROWNED NIGHT HERON.

Nests occur only in colonies, sometimes to the number of thousands. Where timber abounds, platforms of sticks are placed in saplings or tall trees, but in the arid regions they nest upon broken-down tules, or even upon the ground.

No colonies have been reported in Washington, but there must be at least one, probably several, in the Big Bend-Palouse country.

No. 252.

BLACK-BELLIED PLOVER.

A. O. U. No. 270. *Squatarola squatarola* (Linn.).

Synonyms.—BEETLE-HEAD. OX-EYE.

Description.—*Adult in summer:* Above, broadly dusky or black varied by white in spots and terminal edgings, the latter color predominating on top of head and hind-neck and on wings; primaries dusky brown, with large basal areas and portion of shaft (increasing inwardly) white; upper tail-coverts and tail white, barred with black; forehead, space over eye, and sides of neck, to or below breast, white; lining of wings, lower belly, thighs, and crissum, white; sides of head and remaining underparts, including axillars, sooty black; bill and feet black. *Adult*

in winter: Without black below (except on axillars)—white instead; fore-neck and chest streaked and spotted with dusky; dusky of upperparts lighter; and white replaced by pale gray. *Immature*: Similar to adult in winter, but head and neck streaked and back spotted with yellowish-buff. Length 10.50-12.00 (266.7-304.8); wing 7.50 (190.5); tail 3.00 (76.2); bill 1.18 (30); tarsus 1.85 (47).

Recognition Marks.—Killdeer size or larger; black and white in broad design, and without distinct yellow above; below black (in summer) or nearly white (in winter or young); *axillaries black* at any season. Similar to succeeding species, but larger; bill and head larger; presence of hind toe distinctive.

Nesting.—Does not breed in Washington. *Nest*: on the ground. *Eggs*: 3 or 4, light or dark buffy olive, heavily speckled and spotted with dark browns or blacks. Av. size, 2.04 x 1.43 (51.8 x 36.3).

General Range.—Nearly cosmopolitan, but chiefly in the northern hemisphere, breeding far north and migrating south in winter; in America to the West Indies, Brazil, and Colombia.

Range in Washington.—Regular during migrations; less common in the interior.

Authorities.—*S. helvetica* (Linn.) Cuv., **Baird**, Rep. Pac. R. R. Surv. 1858, p. 698. C&S. B. E.

Specimens.—Prov. B. E.

PLOVERS of any sort are not nearly so common with us as they are in the interior, especially the Mississippi Valley, or upon the Atlantic Coast. Birds of this species, however, occur regularly during the migrations, and they even winter sparingly in favored localities on Puget Sound. They frequent both fresh and salt water, and are more often found on the open sand or upon mud-flats than in the marshes or overflowed uplands. Flocks of from three or four to a dozen are the rule, but single birds are very likely to be seen with flocks of the smaller Sandpipers. The little urchins troop at the heels of their larger protector and dog his steps, when one would suppose that he would far rather enjoy the company of his own kind. But the Beetle-head appears to accept his responsibility good-naturedly, and it is probable that the schoolboy rout and its chosen leader do off great distances together.

Because of its large size the Beetle-head is a favorite with the gunners. It is the wariest of the Plovers and does not often allow an approach within gun range; but because of its social disposition it responds readily to decoys, and may be shot from well-constructed blinds. The bird has a beautiful liquid whistle, *wc-u-wc*, descending to a lower pitch in the second note, and returning with a softer utterance in the last. On the wing these call-notes are repeated after long pauses; and when a bird is at rest, if another of the same species alights beside it, the last syllable of the call is passed back and forth between the two in lavish courtesy. Like the Killdeer these Plovers are rather unquiet spirits, and their uneasiness increases with nightfall. At this time they shift from place to place, calling continually, and they sometimes carry their complaints far into the night.

No. 253.

AMERICAN GOLDEN PLOVER.

A. O. U. No. 272. *Charadrius dominicus* Müll.**Synonyms.**—FIELD PLOVER. BULL-HEAD.

Description.—*Adult in summer:* Above dusky, blackening on tips of feathers on back and crown, lightening to fuscous on wing-coverts, tertials, sides of neck, etc.; spotted sharply on back and crown, less distinctly on neck and upper tail-coverts, with bright ochre-yellow; primaries blackish, the basal and a concealed distal portion of each quill white; tail dusky, barred irregularly with lighter grayish brown; entire underparts, except lining of wing, including sides of head, glossy, brownish black; bordered on head, neck, and breast with pure white; lining of wings smoky gray or ashy; bill and legs black. *Adult in winter:* Usually less decidedly black on back; the spotting (streaking on hind neck) finer on upper parts; the ochre-yellow brightest on upper tail-coverts; elsewhere more or less displaced by paler yellow and whitish; below without black; throat and crissum dull white; elsewhere streaked and spotted with light brownish gray, a lighter shade of the same vaguely diffused over the plumage, or else underparts definitely brownish gray, finely spotted with white. *Immature:* Like adult in winter, but lighter below; only the breast tinged, and that uniformly, with light fuscous; pattern of neck all around blended. Length 9.50-11.00 (241.3-270.4); av. of nine specimens: wing 6.83 (173.5); tail 2.56 (65); bill 89 (22.6); tarsus 1.63 (41.4).

Recognition Marks.—Killdeer size. "Golden" speckling of upperparts distinctive. Somewhat smaller than preceding species; bill decidedly smaller; not so white below in fall plumage.

Nesting.—Does not breed in Washington. *Nest:* on the ground with a scanty lining of leaves and grass. *Eggs:* 3 or 4, buffy white to buffy brown, boldly spotted and blotched with brownish black. Av. size, 1.98 x 1.37 (50.3 x 34.8).

General Range.—Arctic America except the coast of Bering Sea, migrating southward thruout North and South America to Patagonia.

Range in Washington.—Not common migrant, chiefly confined to the West Coast.

Authorities.—[Cooper and Suckley, 220. No Washington record.]
Brewster, B. N. O. C. VII. Oct. 1882, p. 227. E(II).

Specimens.—Prov. C.

ALTHO the Golden Plover is commonly reported from various places in the eastern interior during migrations, it is not at all common upon the Pacific slope, nor indeed anywhere west of the Rocky Mountains. The great bulk of the migrants, especially in the fall, appear to pass along the Atlantic Coast, or even at a considerable distance out to sea. During the latter days of August enormous numbers push boldly out to sea from the southern shore of Nova Scotia, and are not seen again until they touch the West Indies, unless they be driven back against the Atlantic Coast by strong east winds, in which case the sportsmen of Massachusetts and Long Island reap a rich harvest.

"The Golden Plover is the most abundant of the strictly migrant species of the family. In April it usually appears in flocks of from thirty to one hundred birds in high meadows and pastures. Their flight is very swift, and the flocks are very close. All movements, when on the wing, are performed with wonderful rapidity and unanimity. They run quickly in the grass, and, while rather shy, exhibit considerable curiosity and some degree of confidence. Their voice is a pleasant mellow whistle frequently repeated while on the wing. During the spring migrations while with us they are changing from winter to breeding plumage. Generally the colors of winter predominate, but sometimes specimens are taken with the underparts nearly uniform black. In September they return in full winter plumage, and now frequent the gravelly and muddy borders of streams, sometimes in large flocks and sometimes in pairs or as single birds, solitary or in company with Tattlers and Sandpipers. At this season their habits are less active than in spring. They are the only birds of the family whose size, abundance, and other qualities entitle them to any consideration as a game bird. As such they are generally esteemed" (Wheaton).

The Golden Plover is to be accounted an abundant bird in many parts of the Arctic regions, especially on the Barren Grounds. McFarlane recorded the finding of one hundred and fourteen sets of eggs during the passage of his expedition from the edge of the northern woods across the Barren Grounds to the shores of the Arctic Ocean. During the breeding season the male "is accustomed to utter a sweet melodious song, most frequently heard during the brief hours of the Arctic night." Nelson represents this song by the syllables, "tee-lee-lee, tu lee lee wit, wit, wit, wee-u wit, che lee u too lee-c."

No. 254.

KILLDEER.

A. O. U. No. 273. **Oxyechus vociferus** (Linn.).

Synonyms.—KILDEER. KILLDEE PLOVER. KILLDEE.

Description.—*Adult*: Crown, and occiput and back bright grayish brown, the feathers edged or narrowly tipped with tawny; rump and upper tail-coverts cinnamon-rufous or tawny; tail like back, crossed subterminally by broad black band, and tipped with lighter brown, ochraceous, and white, the lateral feathers irregularly dusky, white and tawny; primaries dusky, the outer with some white on the inner webs, and the inner ones with white on the outer webs; two black bands across chest, the anterior one nearly reaching around cervix; a band on forehead, separating the white and brown, and another across cheek from bill, impure black; included spaces of head and neck, a ring around cervix, and re-

maining underparts pure white; the brown of back encroaching on sides of breast between black bars, and sometimes suffusing entire space between them; eye-lids bright orange-red; bill black; legs pale. *Young*: With rather more ochraceous or pale rusty edging on back than adult. Length 9.00-11.25 (228.6-285.8); wing 6.34 (161); tail 3.59 (91.2); bill 81 (20.6); tarsus 1.41 (35.8).

Recognition Marks.—Robin size; black and white bands of head and breast; tawny rump; vociferous "*Killdeer*" cries.

Nesting.—*Nest*: on the ground, often upon gravel, unlined. *Eggs*: 4, ovate-pyriform, buffy white or clay-color, boldly spotted and blotched or scrawled with chocolate-brown or brownish black. Av. size, 1.48 x 1.06 (37.6 x 26.9). *Season*: April 20-June 1; one brood.

General Range.—Temperate North America, breeding north to British Columbia, Manitoba, and Newfoundland, migrating to West Indies, Central America, and northern South America.

Range in Washington.—Common summer resident and migrant on East-side; less common summer resident and tardy spring migrant west of Cascades; casually resident east and west; Yakima, Dec. 7, 1899; Tacoma, Jan. 10, 1901 (several flocks); Jan. 10, 1907 (flock of 15).

Migrations.—*Spring*: Very irregular—March (East-side), March-April (West-side); Chelan, March 20, 1896; Seattle, March 18, 1889; Tacoma, April 11, 1906.

Authorities.—*Agialitis vociferus* (Linn.) Cassin, **Baird**, Rep. Pac. R. R. Surv. 1858, p. 602. T. C&S. L². Rh. D¹. Sr. D². J. B. E.

Specimens.—U. of W. Prov. P. B. E.

ALTHO the shrill cry of the Killdeer shouting his name is a welcome sound when it cuts across the frosty sky in early spring, one can scarcely forgive him the immoderate clamor of midsummer, nor the officious way in which this self-appointed guide heralds the approach of the huntsman to every living thing. If you are actually near the nest there is some excuse for alarm, and the female does not fail to try every ruse in the endeavor to lure you away from the dangerous spot. First she rolls and flounders away across the ground, screaming with agony, as tho she had been stepped on. But if you are simple enough to follow, the bird gradually recovers, and is soon able to patter along ahead of you with tolerable celerity. The male, too, is no indifferent spectator. He comes as near as he dares, and shrieks, "*Dear, dear, dear, dear, dear,*" until the wonder is that he does not burst a blood vessel or split his vocal cords. Interested neighbors add their frenzy to the din, until in desperation you are almost ready to believe yourself the frightful villain they are all accusing you of being. If you are willing to quit the place a bevy of fathers will pilot you out of bounds. One will patter ahead of you with breast pushed forward and legs incredibly nimble, only to pull up presently with a jerk and a compensatory bob to ask if you are following. The others describe a great half-circle about you with graceful

wing but unceasing stridor, and take their places in the van. The birds believe themselves extremely clever as they lead you off by alternate flights and sprints, and you may hear them indulge from time to time in a low rapid titter, *tee-tee-t*, which you may be sure is quite at your expense. All this racket is bad enough at best, and one may be really sorry to have intruded at first, but when the whole operation is gone thru with again the next time you happen that way, and when you know that the young are long since flying, all this fuss and outcry is distinctly annoying. One feels as if the Killdeer had contracted the habit of yellow - journalism and couldn't let go.

The Killdeer nests in fallow fields, plowed ground, and open prairie, or else upon the open bars of river courses, never very far from water, but by no means confined to it. The four eggs are invariably placed with the little ends together, so that they may occupy the least room possible; and this appears quite necessary when we note how large they

are in comparison with the parent bird. Sometimes a little grass or crumbled bark or dried rabbits' dung serves for the lining, but often the eggs are laid upon the bare ground. Once, in Yakima County, I found what I think must be regarded as the ideal environment for these eggs. An upland gravel-bed, peculiar to that region, was composed of disintegrating fragments of a light brown lava mingled with the soil. Each pebble of the bed was scrawled and spotted by a black lichen, as tho tar had been carelessly flung about. Upon this bed reposed four Killdeer eggs. When you saw them you saw them, because their outlines were rounded instead of angular; but the moment the



Redrawn by Allan Brooks from Photo by the Author.

ENTICEMENT.

eye departed from them the search had to be commenced anew, so perfectly were the eggs mimicked by their surroundings.

Young Killdeers are delightful absurdities. Their strength is in their legs, and these carry them pattering away, before the embryonic juices are fairly dried upon their backs. They need to be nimble, for all nature turns teeth to little birds that cannot fly. When papa or mamma thinks best, also, the little fellows will crouch and freeze most dutifully. On such occasions the rump, with its ridiculous tuft of lengthened bristles, is stuck up into the air,



Taken in Walla Walla County.

Photo by W. Leon Dawson.

THE TREASURES.

and passes muster for waving vegetation.

Fortunately for them the flesh of the Killdeer is not esteemed for food by humans, so they are allowed to gather in peace into fall companies containing a score or two of individuals. The Killdeer is not gregarious at other times of year, altho a half dozen pairs may nest in the same field; but in fall they flock commonly, and are found about meadow ponds, river bars, and even on the lake beaches.

The month of May, 1907, found the writer encamped with an assistant

on the banks of the Walla Walla River, near Wallula. A grove of yellow-green willows sheltered our tent, but there were abundant reaches of level, grass-covered alluvium hard by. In crossing one of these areas I was intercepted by a Killdeer who pleaded with me against careless steps. A few minutes search availed nothing, and I retired to the shelter of the willows some fifty yards away;—retired and spied upon the little mother as she stole back softly to her eggs.

When I started to return, in guilty possession of the secret, she first slipped away and fed nonchalantly in the distance. But when it became clear that the giant would really traverse the pasture, she summoned her mate and flew to the defense. The male was a timorous fowl and contented himself with wallowing impotently some sixty feet away; but the mother bird arranged a brilliant series of tableaux at twenty. Her object was to distract attention, but as I pursued my purpose relentlessly she dashed up, flung herself at my feet, and floundered painfully away.

At four feet she lost control of herself altogether, and fairly shrieked her solicitude. "Oh, please, Mister! Look out! You'll step on those eggs! Here, look at me! I am dying! Come, eat me!" And so, with frightened eyes, in which pain and a sort of tenderness strove for mastery, she paraded her charms again and again in a vain endeavor to lure me away.

The situation was very inviting for a camera-man (albeit a green background proved to be impossible for instantaneous work at close range), and I returned again and again during the brighter hours of the day. Not once did the little mother omit the preliminary tactics of swooning, pretended lameness, and inviting distress cries. But it became evident that she feared the blundering step more than premeditated mischief. If I walked boldly toward the eggs, as though unaware of their presence, she fairly threw herself upon me in an effort to turn my course. And when I crouched, camera in hand, within a few feet of the eggs, each motion of mine brought out fresh shrieks and renewed posings; whereas the play flagged whenever the tormentor became quiet.

Of course the prime object of the posings was to excite cupidity and to enlist pursuit. To this end the tawny markings of wings and tail-coverts were flashed incessantly, while the body was painfully dragged away. As often as the ruse failed, the bird whirled about, charged forward with drooping wings, as close as she dared (twice actually touching my knees), paused an instant to catch my eye, and started off again, coaxing, tittering, and trembling, as in an ecstasy of invitation. So acute was the need and so absolute the bird's devotion to the imperilled cause, that she was able to put on a mask of coquetry over her heart-break of fear, and to beam enticingly like a maiden to her lover.

Again and again I humored her plea and followed the lure; and as often,

with every symptom of delight, she quickened her pace, taking good care to gain distance on her dupe. When a dozen feet or more removed, she rose and pattered away to fall in another premeditated swoon at twenty. At fifty feet she rose with sparkling eyes and a merry "Ha, ha," to flit away to parts unknown.

The absurdity of this process consisted in its faithful repetition with all psychological accompaniments, as often as I pleased. The bird never tired of



Photo by the Author

SECURE IN POSSESSION

the tragic game, nor seemed to realize that it was a game whose secret I knew all along. It seems as if we might have become better acquainted in time; but no, I must be treated as an ogre to the last.

But now a danger less fanciful threatens. Warm days have melted the snows in the Blue Mountains, and the river begins slowly to rise. A back-water arm curls lazily around our grove, floods it, and bears a shower of yellow catkins on its breast. We have a canoe, and move to higher ground. The water rises steadily, four feet in five days. The field of the Killdeer's

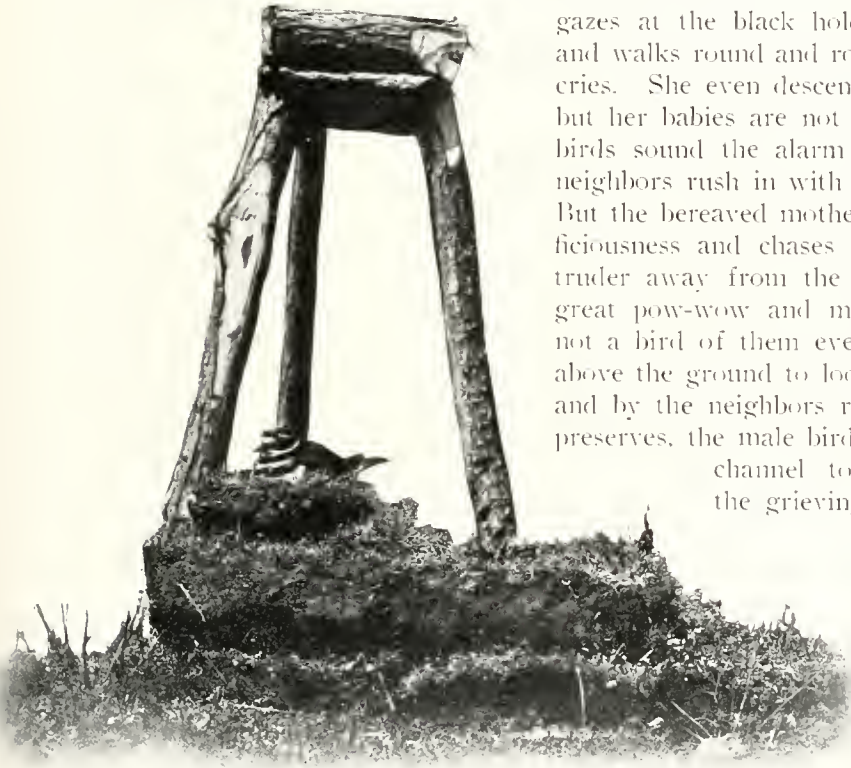
nest becomes a peninsula, then an island, then a smaller island. The thought of the little Killdeer mother losing her first family is not comforting. The eggs must be near hatching now, but it may take three or four days yet; and the water has only a foot to travel vertically. No, those eggs must be saved! But how? They cannot be moved across the ground by slow stages, for they are already upon the highest point of the island. I have it. The bird must travel *up*.

Having first prepared four stout willow stakes, a slab a foot square, and some rustic railing, I repair to the island in the canoe. An upturned kettle is placed over the eggs to protect them while the stakes are driven, inclining outward at the bottom for strength, and the platform nailed on top. Then with axe and hunting knife I cut out a deep sod containing the eggs, lift it carefully, place it in the receptacle provided above, and retire to a distant bank to await the issue.

Great is the mystification and distress of the parent Killdeers upon finding their treasures removed. The little mother gazes at the black hole in consternation and walks round and round it with pitiful cries. She even descends into the cavity, but her babies are not there. Then both birds sound the alarm and sympathizing neighbors rush in with noisy condolences. But the bereaved mother resents their officiousness and chases each inquiring intruder away from the hole. There is a great pow-wow and much *teetering*, but not a bird of them ever thinks of rising above the ground to look for a nest. By and by the neighbors retire to their own preserves, the male bird comes across the channel to watch me, and the grieving mother wanders

about aimlessly on the island.

It is interesting to observe the male at this juncture, for he is seized by an idea—a



THE THREE-SOD STAGE.

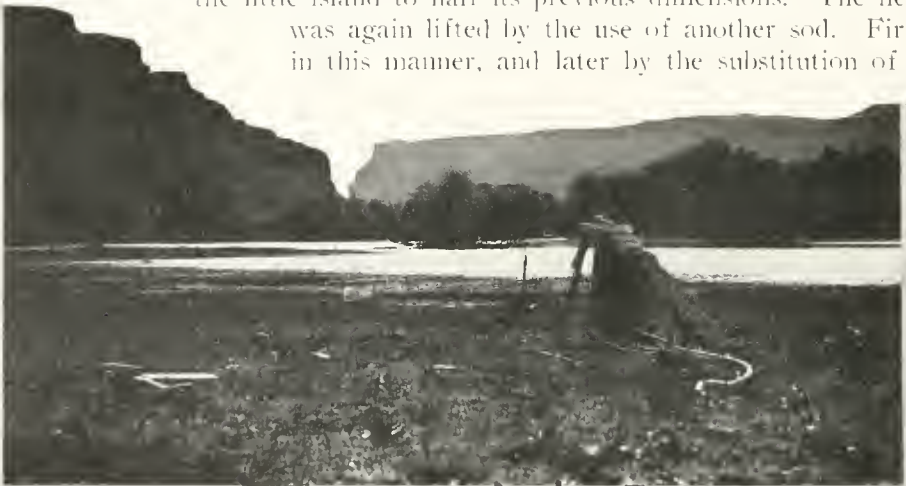
Photo by the Author.

dismal foreboding. Perhaps the bird-man has eaten those eggs! At any rate he will find out if this dreadful person is still temptable. He therefore titers or rather "teeters," alluringly, then runs along mincingly a little way, when he is sure he has my attention; then he settles to the ground with a well simulated chuckle of satisfaction *as tho he were sitting on eggs*. When I do not promptly respond he begins to squirm and beckon, and pour out an amusing "spiel" about the number and quality of those eggs he is covering. It is a clever trick, but the bird-man's character proves unassailable, and the bird retires in disgust. If I didn't eat those eggs, then where in time are they? Search him!

Evidently, however, if I was to save the Killdeer's nest, it must be done by degrees instead of suddenly. I returned, therefore, to the island, and removed the sod with the contents from the trestle, placing it instead upon the ground a little to one side. Returning again to my distant station I had the satisfaction of seeing the female discover her eggs and promptly claim them. This must have cost no little pang of apprehension, for the sod was raised three inches above the ground, and she became immediately the observed of all observers.

Once more her treasures were raised by slipping a second sod under the first and placing a third for a doorstep. This time, again, she quickly mounted, and I retired for the night with the full assurance that the new scheme was working.

Returning on the morrow I was gratified to find the faithful Killdeer on her nest; and the more so that the water had risen four more inches, reducing the little island to half its previous dimensions. The nest was again lifted by the use of another sod. First in this manner, and later by the substitution of a



SAVED.

Photo by the Author.

sod-covered runway for the steep stair-case, the bird was induced to visit her eggs upon the very summit of the platform. The river, meanwhile, was finding considerable lateral relief and a further rise of more than one or two feet seemed improbable. It was thus I left the Killdeer, seated on her little Eifel, in comforting assurance that her treasures were safe.^a

No. 255.

SEMIPALMATED PLOVER.

A. O. U. No. 274. *Ægialitis semipalmata* Bonap.

Synonyms.—RING PLOVER. RING-NECK.

Description.—*Adult in summer:* A narrow black band across breast and continuous around hind-neck; fore-crown and a band on side of head below eye to bill, and meeting fellow on extreme forehead, black mixed with brown; forehead, indistinct superciliary line, lower eye-lid, chin, and throat, continuous with narrow band across cervix, and remaining underparts, white; crown and nape, back, etc., bright grayish brown; upper tail-coverts and base of tail a little lighter; tail blackish subterminally, the outer pair of feathers pure white, the others decreasingly white-tipped; greater wing-coverts white-tipped; primaries blackish, the basal and subterminal portion of their shafts white; bill black, orange-red at base; feet and legs yellowish. *Adult in winter:* The black markings replaced by dark grayish brown. *Young:* Similar to adult in winter, but feathers of upperparts tipped with light buffy. Length 6.50-7.50 (165.1-190.5); wing 4.90 (124.5); tail 2.10 (53.3); bill .52 (13.2); tarsus .97 (24.6).

Recognition Marks.—Sparrow size, but appearing larger; a miniature Killdeer, but without tawny rump, and with only *one* band across breast. Feet partially webbed.

Nesting.—Not known to breed in Washington. *Nest:* on the ground. *Eggs:* 3 or 4, like those of the Killdeer, but smaller. Av. size, 1.30 x .92 (33 x 23.4).

General Range.—Arctic and subarctic America, migrating south thru tropical America as far as Brazil, Peru and the Galapagos.

Range in Washington.—Not uncommon during migrations, chiefly coastwise; Destruction Island, July 16, 1906.

Authorities.—*Ægialitis semipalmatus* (Bon.) Cab., **Baird**, Rep. Pac. R. R. Surv. 1858, p. 695. C&S. L. B. E(II).

Specimens.—U. of W. Prov. B.

THE Semipalmated Plover is a miniature Killdeer to appearance, but it has only one black chest-band instead of two. It is not a noisy bird like the Killdeer for it patters about silently when in quest of food, and utters only a "soft, mellow whistle" when put to wing.

a. "Saving the Killdeer's Nest," The Pacific Monthly, Oct. 1908, p. 395 f. Reproduced here in substance by courtesy of The Pacific Monthly Publishing Company.

Comparatively few birds of this species pass along the Pacific Coast during migrations. They breed commonly in Alaska, in the interior and northern portions, but are more likely to return south by the overland route, especially east of the Rockies. The migrant birds, either singly or in small companies, pause wherever daybreak arrests their flight, on mud-flats, gravel-bars, or sandy beaches. If upon the shore of lake or ocean, they associate freely with Sanderlings, and either pursue with them the retreating wave, or else retire a little way to glean among the pebbles of the higher levels.

The northern season is very short, and I have seen adults southbound as early as July 15th, on Destruction Island.

No. 256.

SNOWY PLOVER.

A. O. U. No. 278. *Ægialitis nivosa* Cassin.

Description.—*Adults in summer:* Somewhat similar to *A. semipalmata*, but bill entirely black, and black markings of head much reduced; upperparts pale ashy gray, tinged, especially on crown, with buffy; wing-quills fuscous and black with some outcropping white on outer webs of inner primaries; greater coverts and primary coverts tipped with whitish; a short black bar across crown not extending to eyes; a black post-ocular stripe curving downward behind auriculars; a touch of black on lores anteriorly; a transverse patch of black on each side of breast (vestiges of the pectoral collar which marks other species); forehead broadly, sides of head, a cervical collar, and underparts, snowy white; bill and feet black. The black of the female is less pure and that of both sexes in winter is replaced by grayish brown. *Immature:* Without black; the gray of upperparts darker, varied by whitish edges and tips; the black on sides of breast replaced by color of back. Length of adult: 6.25-7.25 (158.8-184.2); wing 4.25 (108); bill .60 (15.2); tarsus 1.00 (25.4).

Recognition Marks.—Sparrow size; bill black; no pectoral band; extensive white on head.

Nesting.—*Nest:* a depression in sand or beach shingle. *Eggs:* 3 or 4, pale dull buffy, speckled and spotted with dark brown and black. Av. size, 1.21 x .87 (30.8 x 22.1). *Season:* May-June; one brood.

General Range.—United States chiefly west of the Rocky Mountains, breeding on Pacific Coast north to Washington (?). Great Salt Lake, Atlantic and Gulf Coast in Florida, etc.; wintering in California, Texas, Cuba, etc., south to Chili.

Range in Washington.—West Coast, one record; possibly breeds.

Authorities.—Bowles and Dawson, Auk, Vol. XXV, Oct. 1908, p. 484.

Specimens.—B.

"SNOWY" is perhaps a rather strong term to apply to a bird whose upperparts are grayish brown (the color of wet sand), and which boasts emphatic dabs and patches of black besides; but the pure white of the underparts and face is more extensive than in the case of any other plover. Moreover, by a sort of poetic license, the mind associates this nimble patterer with the snowy crests of the waves, from whose retreating footsteps the bird manages to snatch a fat living.

These Plovers appear in small flocks during migrations, and in the nesting season a suitable stretch of beach may prove equally attractive to half a dozen pairs. The eggs, three or four in number, are laid in a slight depression of the dry sand, without pretense of cover; but all the information volunteered as to their whereabouts by the hovering or limping parents is studiously incorrect, and the eggs when found become again invisible once the eye leaves them.

Great Salt Lake in Utah and the ocean beaches of southern California are typical summer ranges of the Snowy Plover; but the bird has been described from near the Columbia in Oregon, and a specimen was taken at Gray's Harbor by Mr. C. W. Bowles; so that it is more than likely to be found breeding in small numbers along the southern portion of our own Pacific shore.



PLOVERDOM.

No. 257.

WILSON'S SNIPE.

A. O. U. No. 230. *Gallinago delicata* (Ord.).

Synonyms.—AMERICAN SNIPE. JACK SNIPE. "ENGLISH" SNIPE. BOG-SUCKER.

Description.—*Adult*: Upperparts brownish black, freckled, mottled, barred, and streaked with ochraceous-buff and whitish; crown and back nearly pure black, the former divided by irregular buffy median line; the scapulars and interscapulars bordered by whitish or cream-buff, on outer margins only; wings fuscous, the edge including outer web of first primary, white; the greater coverts, secondaries, and sometimes inner primaries narrowly tipped with white; a dark line from eye to bill; throat whitish; sides of head and neck and breast ochraceous-

buff, finely spotted and streaked, or indistinctly barred with blackish; belly white, the axillars, sides and flanks strongly barred,—blackish and white; both tail-coverts and exposed tip of tail strongly ochraceous-buff, or rufous, finely barred with black; tail-feathers black basally, some of the lateral ones white or white-tipped. Length 10.00-12.00 (254-304.8); wing 5.00 (127); tail 2.40 (61); bill 2.50 (63.5); tarsus 1.25 (31.8). The female averages smaller than the male.

Recognition Marks.—Robin size; general mottled and streaked appearance; long bill used as mud-probe; marsh-skulking habits, and *jack, jack* notes on rising.

Nesting.—*Nest*: on the ground. *Eggs*: 3 or 4, clay-color, olive, or ashy-brown, spotted and blotched with reddish brown or umber. Av. size, 1.58 x 1.14 (40.1 x 29). *Season*: c. June 1st; one brood.

General Range.—North and middle America, breeding from the northern United States northward; south in winter to the West Indies and northern South America.

Range in Washington.—Spring and fall migrant and winter resident in suitable localities thruout the State; breeds sparingly east of the Cascades.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Cones, Vol. II, p. 186.] *G. wilsonii* (Temm.) Bon., **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 711. T. C&S. L, Rh. D^r, Sr. Kb. D^r, Kk. J. B. E.

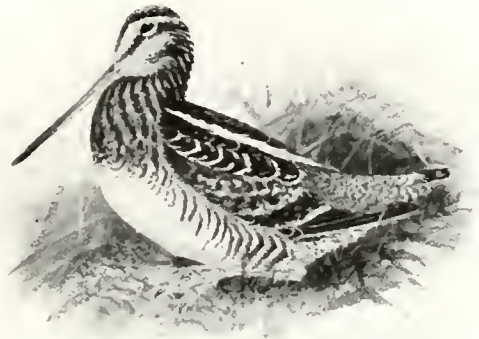
Specimens.—U. of W. Prov. P^r, B. E.

WHENEVER the word "snipe" is uttered we think most naturally of this recluse of the inland fens, for he is *the* Snipe of America. Altho possessing much in common with the European Snipe (*G. gallinago*) and something with the Woodcock (*Philohela minor*) of the Eastern states, his ways are peculiar enough to make him distinctly known to every sportsman. He is rather a disreputable looking fellow, a tatterdemalion in fact, as he bursts out of his bog with an exultant cry of "*escape, escape*," and flutters his rags in the wind. And as he pursues his devious way thru the air, jerking hither and thither in most lawless fashion, the gunner could easily believe him an escaped jail-bird if the stripes of his garments only ran the other way.

The Wilson Snipe is a bird of the open marsh, a frequenter of the grassy border stretches, or of the boggy margins of the "spring branch." Here he lies pretty closely by day, but as dusk comes he bestirs himself and goes pattering about in the shallow water or over the weedy scum-strewn muck, thrusting his beak down rapidly into the ooze and extracting worms or succulent roots. If danger approaches by day, the bird's first instinct is to crouch low. If the sky is clear, it is difficult to dislodge him, for the light blinds him in the air, and he knows that his ragged blacks and browns exactly match the criss-crossed vegetation and interlacing shadows of his present surroundings. If, however, the day be overcast and windy, the bird springs up quickly against the wind, shouts "*Jack, Jack*," twice, pursues a bewildering zigzag until out of

range, and then flies straight to some other feeding ground, or circles about and enters the old one from another quarter. This zigzag flight, which is the joy of the old gunners and the despair of the young, is really a wonderful exhibition of the self-protecting instinct. For we cannot fairly accuse the Snipe of not knowing his own mind, since when once out of harm's way, his flight is direct and rapid, and he drops into a bog like a shot. The trick must have been deliberately acquired. The cries of the first bird startled are sometimes a signal for all the others in a given swamp to rise and dodge about in the upper air, taking distant counsel whether to return or fly to pastures new. In either case the sport is off for that day, for the aerial caucus is a sign that the birds won't stand much fooling.

Of course the degree of timidity which the birds exhibit in any locality is simply a matter of the amount of persecution to which they have been recently subjected. Sometimes the entrance of a gunner into a field is the signal for the Snipe to flee the country. On the other hand, I once approached in midwinter a bird which I knew to be in perfect condition, and which stood quizzically in full survey until I got within five feet of it, whereupon it calmly *swam* across a little brook rather than bother to fly from the harmless bird-man.



WILSON SNIBE "FREEZING."

All the members of the Snipe family proper, the *Scolopacidæ*, rank high as table birds, but the Wilson Snipe, with the Woodcock, are the most highly prized. Water animalculæ and many kinds of insects appear upon Jack's bill-of-fare, but subterranean worms are the mainstay. These are obtained in large measure by the direct probing of the bird, who is provided with a long beak, having a sensitive and partly flexible tip, controlled by a special set of muscles. In addition to this, however, it appears to make use of an ingenious device. While walking thru a marsh patches of mud are often found sprinkled with small round holes set close together. These are the work of snipe, and are called "borings," being made by the bird, thrusting its long bill into the mud as far as the forehead. As it walks over and around the holes, insects and worms crawl out of them and are captured. Much the same thing may be done in a garden by boring a quantity of holes with a small stick, and then rapping the ground with it smartly.

Besides its semi-nocturnal habits and fashion of probing the mud for food, the Wilson Snipe closely resembles the Woodcock in the manner of its love-making. Indeed, never having had opportunity of simultaneous comparison, I cannot now distinguish in memory the characteristic hooting notes of the Snipe from those of the Woodcock. I have seen the former, not only at the favorite hours of dawn and sunset, but at high noon as well, hovering over a pasture swamp patch, or cutting mysterious figures in high air, and uttering ever and anon the most lugubrious, love-lorn strains, like unfocused flute-notes. This passion song of the Jack-snip has been called drumming, but the term is inappropriate. When the nesting season is on the male betrays his anxiety by resorting frequently to commanding positions on fence-posts and stumps. Sometimes, when greatly excited, the bird will utter a harsh, guttural cackling or bleating note. On such occasions, when the bird is settled on a post regarding you with sober, down-turned beak and watchful eye, the effect is irresistibly comical. And you might as well laugh, for you can't find the nest—not once in a dozen times.

No. 258.

LONG-BILLED DOWITCHER.

A. O. U. No. 232. *Macrorhamphus scolopaceus* (Say).

Synonyms.—WESTERN DOWITCHER. WESTERN RED-BREASTED SNIPE. RED-BELLIED SNIPE.

Description.—*Adult in summer:* Upperparts black, finely mottled and streaked with pale cinnamon-rufous, and with some white; rump and upper tail-coverts white, finely and heavily marked with broadly crescentic, blackish spots, and sometimes tinged with ochraceous; tail barred with black and white or with black and ochraceous; lesser wing-coverts light grayish brown; primaries dusky; the greater wing-coverts and secondaries varied by white margining, shaft-marks and tips; a chain of dark specks from bill to eye; belly whitish; remaining underparts rich cinnamon, finely but not heavily speckled on sides of head and neck, and across breast with blackish; thickly barred with the same on sides and flanks; axillars and lining of wings white, striped and barred, or with V-shaped markings of dusky; bill and legs greenish black. *Adult in winter:* Pale cinnamon-color wanting; above brownish gray, the feathers with darker centers; rump and upper tail-coverts black and white without ochraceous; indistinct superciliary white stripe; underparts white,—clear on belly, shaded with ashy gray on throat and breast; the sides and under tail-coverts barred with blackish. Length 11.00-12.50 (279.4-317.5); wing 5.72 (145.3); tail 2.20 (55.9); bill 2.72 (69.1); tarsus 1.53 (38.9).

Recognition Marks.—Robin size; pale cinnamon predominant above and rich cinnamon below in summer; fine mottling of back in either plumage; long bill; beach-haunting habits.

Nesting.—Does not breed in Washington. *Nest*: on the ground. *Eggs*: 4, like those of preceding species. Av. size, 1.74×1.21 (44.2×30.8) (Ridgw.).

General Range.—Western North America, breeding in Alaska to the Arctic Coast; migrating south in winter thru the western United States (including Mississippi Valley) to Mexico and, less commonly, along the Atlantic Coast.

Range in Washington.—Regular migrant along the coast and on Puget Sound; less common in the interior (Hoover, May 3, 1907).

Authorities.—Baird, Rep. Pac. R. R. Surv. IX, 1858, p. 713. "Washington Territory (Dr. Suckley)." [C&S, 238, under *M. griseus*—specimen described unquestionably referable to *M. s.*] T. L², Rh. B.

Specimens.—(U. of W.) Prov. B.

AT first sight, and upon the ground, the Dowitcher might be mistaken for a Wilson Snipe, but immediately we have conceded so much, points of difference bristle into view. At rest the Dowitchers never think of hiding in the grass, as does the Jack Snipe, for they feed instead along in the open on the muddy bank of a stream, or upon the sand-bars which emerge as the tide goes out. Nor do they wait altogether for the water to retire, but wade in and probe the bottom to the limit of their legs and bills. In flight they move swiftly and directly, usually at a slight distance from the ground, and one catches flashes of white from the lower back and rump, which set all doubts as to identity at rest.

Dowitchers are very fond of company, and usually move about in small flocks numbering from half a dozen to a score of individuals. They are fond, too, of imposing their company upon other snipe people, and seldom do they neglect an opportunity of attaching themselves to a flock of Curlews or Plovers, or any of the smaller Sandpipers. Once when I was levelling at a trio of Black-bellied Plovers (*Squatarola squatarola*), and had my head buried under a focusing cloth, I was surprised upon looking up to find as many more unbidden guests, motionless, as is the wont of birds just lighted, and invisible upon the ground-glass by reason of their similarity to the background of sand.

These plain birds are modest, as becomes their attire, gentle, and unwary, save as cruelly disciplined by the gunner. They possess, too, that fatal gift of sympathy, which bids them tarry for their fallen comrades, and affords the gunner a second opportunity.

This species may undoubtedly be found upon the borders of lakes in Eastern Washington during migrations, but it is much more common on Puget Sound and along the Straits of Juan de Fuca in April and September. Suckley regarded them as summer residents near Fort Steilacoom, and cites the example of a female killed on the 5th of May, which from the appearance of her plumage he thought to be a sitting bird. But there are no recent instances and the observer might have been mistaken in his conclusions.

The typical breeding range is Alaska, and Nelson found them mating at the mouth of the Yukon about June 1st. "Two or three males start in pursuit of a female and away they go twisting and turning, here and there, over marsh and stream, with marvelous swiftness and dexterity. At short distances a male checks his flight for a moment to utter a strident *peét u wéet*; *wéc-too*, *wéc-too*; then on he goes full tilt again. After they are mated, or when a solitary male pays his devotions, they rise 15 or 20 yards from the ground, where, hovering upon quivering wings, the birds pour forth a lisping but energetic and frequent musical song, which can be very imperfectly expressed by the syllables *peét-peet*; *péc-ter-wéc-too*; *wéc-too*; *péc-ter-wéc-too*; *péc-ter-wéc-too*; *wéc-too*; *wéc-too*. This is the complete song, but frequently only fragments are sung, as when the bird is in pursuit of the female."^a

The eggs, four in number, and closely resembling those of the Wilson Snipe, are placed in a shallow depression formed by the bird's body in the soft moss which covers the ground in that region.

No. 259.

KNOT.

A. O. U. No. 234. **Tringa canutus** Linn.

Synonyms.—ROBIN SNIPE. GRAY SNIPE.

Description.—*Adult in summer:* Upperparts light gray, streaked centrally with black (narrowly on crown and nape, broadly on back and scapulars), and varied irregularly with some ochraceous buff; primary coverts and primaries blackish, the latter with white shafts; upper tail-coverts with subterminal U- or V-shaped markings of dusky; tail uniform, grayish brown; underparts in general pale cinnamon-rufous; cheeks and superciliary region washed with same, and dusky-streaked; paler or white on belly; crissum, under tail-coverts, thighs, lining of wings, and sides white,—the last two and sides of breast more or less dusky-barred; bill and feet greenish black. *Adult in winter:* Above plain ashy gray; upper tail-coverts and tail as before; underparts white; the sides of neck, fore-neck, and chest with faint dusky streaks, or irregular bars, and the sides similarly barred. *Immature:* Above, ashy gray, mottled with dusky on crown; with whitish edging and narrow submarginal dusky on feathers of back and scapular region; the fore-breast flecked or streaked, but not barred, with dusky; otherwise much as in winter plumage adult. Length 10.00-11.00 (254-270.4); wing 6.50 (165.1); tail 2.31 (58.7); bill 1.34 (34); tarsus 1.23 (31.2).

Recognition Marks.—Robin size; called "Robin Snipe" from the cinnamon-rufous of breast (in summer); the largest of the *Tringa*; found coastwise.

Nesting.—Does not breed in Washington. *Nest:* on the ground. *Eggs:* only one specimen known,—that taken from bird by Lieutenant Greely, near

a. E. W. Nelson: "Rep. of Natl. Hist. Colls. Made in Alaska. 1877-1881," p. 101.

Fort Conger; described as "light pea-green, closely spotted with brown in small specks about the size of a pin-head." Size, 1.10 x 1.00 (27.9 x 25.4).

General Range.—Nearly cosmopolitan. Breeds in high northern latitudes, but visits the southern hemisphere during its migrations.

Range in Washington.—Not common migrant, chiefly coastwise.

Migrations.—*Spring*: May; Moses Lake, May 14, 1906. *Fall*: July-August; Point Grenville, July 9, 1906.

Authorities.—Rhoads, Auk, X. Jan. 1893, p. 17. B.

Specimens.—Prov. B.

"WHEN King Canute, or Knut, had dined on a dish of strange coast-faring birds, he was gracious enough to express to his blushing chef the royal appreciation of the flavor. Whereupon the eager courtiers dubbed the waders Knuts, or Knots, and so they have come down to us—at least so Pennant says; and Linnæus, not over-serious (he was a busy man with all of Adam's task to finish) accepted the tradition in '*Tringa canutus*.' It is certainly fitting that these birds of the farthest north should bear the name of some hardy Norseman.

"Knots had swept down the roaring coasts for centuries, but the mystery was, Where do they come from? Sir So-and-so was charged to bring back with him from the algid North, along with sundry information about the tides, and temperatures, and short cuts to China, a set of Knot's eggs; but he came back empty-handed. Grizzled sea-captains said, 'Lo, here! lo there! they breed'; but the eggs were not forthcoming. Finally, it was left for our own Lieutenant Greely to bring back the first authentic specimen, one taken near Fort Conger, Lat. 81° 44', North, together with the parent bird. Verily, if we were Knots even baby Knots, we might stand some show of reaching the North Pole" (The Birds of Ohio).

The Robin Snipe are found chiefly coastwise, but they are much more common on the Atlantic seaboard than along our shores; in fact, in spite of Fannin's comment, "Abundant during migrations," we hardly count them less than rare on Puget Sound. They move singly or in small flocks, and may be found on the mud flats as well as sandy beaches. The plain dark coloration of an adult does not attract attention at a distance, but it is often associated in feeding and in flight with more brightly colored birds, notably the Turnstone (*Arenaria morinella*). It is moreover, one of the least suspicious of the larger shore birds and decoys readily to any whistle of its genus, even tho the gunner be standing in plain sight.

The Knots feed chiefly upon aquatic insects, crustaceans, and small bivalves. These it secures chiefly from the wake of the receding wave, but it swims also with ease, and does not fear a little buffeting on the part of the

racing "hurryback." At high tide it retires cheerfully to the marshes and probes for food in the more open places.

The home-making within the Arctic Circle seems incredibly brief, but it is probably unfair to identify the northbound loiterers of June 1st with those who report back "All done" on July 10th.

No. 260.

SHARP-TAILED SANDPIPER.

A. O. U. No. 238. *Pisobia aurita* (Latham).

Description.—*Adult*: Above, feathers dusky centrally with edging of buffy and flaxen, edgings narrowest on tertials and rectrices, palest rufous on crown (flight feathers nearly pure dusky); tail wedge-shaped, graduated, each feather tapering sharply; underparts white with strong buffy brown suffusion on throat and across breast; this area lightly speckled with obscure dusky, more heavily on sides of neck and breast; sides of head and obscure superciliaries whitish; flanks narrowly streaked with dusky; (from a Dec. specimen in Provincial Museum, Victoria). "Bill changing from greenish yellow basally to blackish toward tip; feet greenish yellow." Length of adult: 8.00-9.00 (203.2-228.6); wing 5.00-5.50 (127-139.7); tail 2.35 (59.7); bill 1.00 (25.4); tarsus 1.20 (30.5).

Recognition Marks.—Chewink size. Most like *P. maculata*, especially in pattern of upperparts—a little smaller, more lightly streaked on breast.

General Range.—Coast of eastern and northern Asia, east to Alaska, south during migrations to Australia; casually(?) south in winter on the west coast of America to Queen Charlotte Islands.

Range in Washington.—One record, as below.

Authorities.—Edson, Auk, Vol. XXV, Oct. 1908, p. 431.

Specimens.—Prov.

MR. EDSON'S record of four specimens taken at Bellingham in September, 1892, marks the southernmost occurrence of this Asiatic species upon the American Coast. On December 27, 1897, two specimens were taken at Massett, Queen Charlotte Islands, by Rev. J. H. Keen.

Mr. E. W. Nelson added this Sandpiper to the American fauna in September, 1877, near St. Michaels, and in succeeding autumns found it to be one of the most common species of snipe thereabouts. He found them associated with Pectoral Sandpipers (*Pisobia maculata*), which they somewhat resemble both in appearance and habit. It is supposed that the bird nests in northern Siberia, and that it sweeps thru western Alaska in the course of its return journey around the Asiatic coast; whence, as in many other cases, stragglers occur irregularly southward upon the American side.

No. 261.

PECTORAL SANDPIPER.

A. O. U. No. 239. **Pisobia maculata** (Vieill.).**Synonyms.**—GRASS SNIPE. KRIEKER. JACK SNIPE.

Description.—*Adult*: Above, ground-color, blackish, everywhere heavily margined, and thus finely streaked, with ochraceous-buff, ochraceous, or rusty, and with some grayish or whitish edging on the larger feathers; darker on crown, where streaked with rusty only; wing-quills dusky, the first primary only with white shaft; rump and upper tail-coverts black, delicately tipped with rusty; tail sharply pointed, the central feathers longest,—blackish centrally, brownish gray laterally, with ochraceous or white edging; below, sides of head and neck, fore-neck and breast finely, sharply, and heavily streaked with dusky on a dull white or buffy ground; throat and remaining underparts white; bill and feet greenish dusky. *Coloring in winter* perhaps more blended. There seems to be no constant difference between summer and winter plumages,—conflicting authorities to the contrary. *Immature*: A little brighter-colored above, with sharper markings and more rusty, and with considerable white edging on larger feathers of back; the breast more deeply buffy, and the streaks, if possible, more numerous. Length 8.00-9.50 (203.2-241.3); wing 5.40 (137.2); tail 2.67 (67.8); bill 1.17 (29.7); tarsus 1.10 (27.9).

Recognition Marks.—Chewink size, but appearing larger; fine streaking of fore-neck and breast on heavy ground, contrasting with pure white of throat and belly, distinctive for size.

Nesting.—Does not breed in Washington. *Nest*: on the ground. *Eggs*: 4, drab, sometimes with a greenish shade, spotted and blotched with reddish brown. Av. size, 1.45 x 1.04 (36.8 x 26.4). *Season*: June.

General Range.—The whole of North America and the West Indies, and the greater part of South America. Breeds in the Arctic regions. Of frequent occurrence in Europe.

Range in Washington.—Not common migrant on Puget Sound;—has not been reported from East-side.

Authorities.—*Tringa maculata* Vieill., Baird, Rep. Pac. R. R. Surv. 1858, p. 721. C&S. B. E.

Specimens.—(U. of W.) Prov. Pl. B.

“CASUAL during migrations” is about as much as we can allow for this interesting species, which is so abundant East. It rarely occurs alongshore and then only as a single individual, over-persuaded by a flock of beach-loving companions with whom it has cast a migrant’s lot. Its normal range comprises flooded meadows, upland marshes, and the borders of pools. Flocks are sometimes seen in spring, but more records are occasioned by young birds trying to improve upon the established migration route of their elders, a course which seems to pass from Alaska eastward, and thence down the Mississippi Valley.

When startled, a flock of, say, fifty of these Sandpipers moves off as one bird, wheeling and turning at precisely the same moment, and presenting in the early morning a pleasing alternation of flashing white, when the underparts are exposed, and somber gray, when the backs appear. While on the wing the birds keep up a cross-fire of peculiar, wild, creaking notes; but upon alighting, they scatter widely in search of food and are mainly silent. They both glean and probe on land, or wade about busily in the grassy plashes. At the approach of danger the waders will often crouch low upon the ground in the hope of escaping observation. In the autumn, when each individual shifts for itself, the bird is said to lie well to a dog; and upon being flushed it moves off with a rapid zigzag flight much admired by the knights of the reeking tube.

Very interesting accounts of the breeding habits of these birds in their Alaskan home reach us thru the pen of Mr. E. W. Nelson. According to this careful observer, the males are able to distend the loosened skin of the breast, inflating it, together with the esophagus, with air, until it becomes nearly as large as the rest of the body. With these absurd appendages, they run up and down before the females, or essay strange sallies in the air. While engaged in these attempts to win attention, they utter notes which are hollow and resonant, but at the same time liquid and musical, and may be represented by a repetition of the syllables *tōō-u*, *tōō'-u*, *tōō'-u*.

No. 262.

BAIRD'S SANDPIPER.

A. O. U. No. 241. *Pisobia bairdii* (Coues).

Description.—*Adult in summer:* Upperparts fuscous, with considerable edging of buffy and light brownish gray,—the buff mostly in lateral striping on top of head and hind-neck, where predominant, and as terminal edging on back, etc.; some whitish edging on coverts, secondaries and inner quills, but no strong shades or contrasts anywhere; upper tail-coverts and tail dark fuscous, the former tipped with buff, and the latter edged with whitish, the outer feathers becoming much lighter; forehead and supra-loral streaks white; throat white; the sides of the head, and neck, and breast, with a heavy buffy suffusion, lightly spotted and streaked with brownish dusky; remaining underparts white; bill and legs black. *In winter,* the shades of the upperparts are a little more blended. *Immature:* Similar to adult, but lighter above, light brownish gray predominating; the feathers of back and scapulars rounded, with conspicuous, white, terminal edging; the streaking of breast, etc., less distinct. Length 7.35 (180.7); wing 4.83 (122.7); tail 2.03 (51.6); bill .91 (23.1); tarsus .94 (23.9).

Recognition Marks.—"Sparrow" size, but appearing larger; about the size of a Spotted Sandpiper; dull fuscous and buffy coloration of upperparts; buffy breast streaked with fuscous; upper tail-coverts *not* white.

General Range.—North America chiefly in the interior during migrations; breeds in the high North and winters in Central and South America, south to the Falkland Islands. Occasional in Europe.

Range in Washington.—Common migrant on the East-side, sometimes abundant in August, and visiting the highest lakes of the Cascades. Not yet reported from Puget Sound.

Authorities.—Dawson, Auk, Vol. XVIII., Oct. 1901, p. 402. D².

Specimens.—Prov. P¹.



BAIRD'S SANDPIPER.

APART from a few fragments of authentic information which have drifted down to us from Arctic America, the various reviews of this bird are cleverly disguised confessions of ignorance. There really is little to distinguish it during migrations, as it associates with any one of half a dozen closely related species. The case is even worse when it appears alone by some way-side plash or mountain lakelet. We should like to be very certain which of several white and gray nondescripts it is, but what business have we to shoot

an inoffensive body because he speaks (or is silent in) another tongue, and will not give us his name on demand?

Three Washington appearances are credited in my mind to this bird, but I cannot take shot-gun oath upon any one of them. In Yakima County during August numerous scattering individuals were encountered during the course of a long drive, as they fed by the side of irrigating ditches or overflow ponds. Their frightened rising occasioned a considerable exhibition of dainty drapery, the tail in particular being outspread like a fan, and its whitening sides supported by the abundant white of the under tail-coverts.

On July 21st, 1900, Professor Lynds Jones and myself saw a solitary bird spending the day beside an ice-fed lake, on the shoulder of Wright's Peak, in Chelan County. Untrained eyes saw nothing but emerald water and a frowning glacier, but the bird appeared satisfied with the entomological possibilities and was disturbed not a whit by the stark loneliness.

At Blaine the same summer we found Baird Sandpipers upon the beach in company with Westerns (*Ereunetes mauri*).

No. 263.

LEAST SANDPIPER.

A. O. U. No. 242. **Pisobia minutilla** (Vieill.).

Synonyms.—AMERICAN STINT. PEEP.

Description.—*Adult in summer:* Upperparts brownish black, relieved by fuscous on wings, hind-neck, etc.; the feathers more or less bordered with grayish and rusty-ochraceous, especially on scapulars, where deeply indented, often nearly to shaft; upper tail-coverts and central feathers of tail brownish black; remaining tail-feathers ashy gray; sides of head, neck, and breast ashy or brownish white, spotted and streaked with dusky; a few dusky streaks on sides; remaining underparts white. *Winter plumage:* Above plain brownish gray, black, if at all, only in mesial streaks; spotting of breast nearly obsolete. *Immature:* Similar to adult in summer, but without ochraceous indentations on scapular feathers; feathers of back with rounded ochraceous tips, scapulars with white tips on outer web, etc.; breast not distinctly streaked. Length 6.00 (152.4); wing 3.60 (91.4); tail 1.70 (43.2); bill .80 (20.3); tarsus .73 (18.5).

Recognition Marks.—Warbler to Sparrow size; least among Sandpipers; most liable to be confused with *Ereunetes pusillus* and *E. mauri*, from which it differs in its slightly smaller size, slender bill, more extensively washed breast, and rather darker coloration above. The absence of webs on the feet is, of course, distinctive.

Nesting.—Does not breed in Washington. *Nest:* on the ground. *Eggs:*

3 or 4, light drab or grayish buff, speckled and spotted with deep chestnut and purplish gray. Av. size, 1.15 x .85 (29.2 x 21.1).

General Range.—The whole of North and South America, breeding north of the United States.

Range in Washington.—Common migrant thruout the State.

Authorities.—*T. wilsonii*, Nutt., **Baird**, Rep. Pac. R. R. Surv. IX., 1858, p. 722. T.? C&S. L². Rh. D¹. D². B. E.

Specimens.—(U. of W.) Prov. B. E.

IT is with a distinct sense of privilege that one is permitted to gaze upon a company of these elfin waders at meal time. Not soon shall I forget a Sunday stroll which led past the corner of a certain brick-yard pond on a bright May afternoon. A tiny babel of soft peeping had given us warning of what we might expect to see, if we managed to steal up to the edge of the shallow cut unobserved. By exercising care and patience, both my wife and I succeeded in seating ourselves on the near brink without alarming the little strangers. They seemed to accept us as a part of their gracious horizon, which is the birthright of both innocence and optimism. So confiding were they that at a distance of thirty feet they not only went on in their quest of food, but one had a sound nap on shore, a Sunday nap, with his head tucked snugly beneath his wing.

In their search for food the Peeps appeared to depend entirely upon their bright eyes to spy tidbits and unguessable delicacies in the shallow water or on the oozy bottom; and they waded about, belly deep, thrusting their heads under water as fearlessly as ducks. There was little said except when some member of the party flew further than usual, when they set up a quaint clamor, which seemed like a faint echo of the far-sounding surf on Arctic seas. The travellers were scrupulously neat in their habits, dividing their time about equally between dabbling in the water for food and making their toilets on shore. A few hours for rest and refreshment beside a prosy brick-yard pond in the Southland, and then,—Heigh ho! for Point Barrow!

No. 264.

RED-BACKED SANDPIPER.

A. O. U. No. 243 a. ***Pelidna alpina sakhalina*** (Vieill.).

Synonyms.—AMERICAN DUNLIN. OX-BIRD.

Description.—*Adult in winter:* Above, nearly uniform light brownish gray, the feathers slightly darker centrally, or with dusky mesial streaks; primary-coverts and wing-quills blackish; the greater coverts white-tipped; the inner primaries narrowly white-edged; the secondaries increasingly white on the inner web; the tertials almost entirely white; upper tail-coverts like back or darker, but

the lateral feathers white or white-edged; an impure whitish superciliary line; sides of head and neck and across fore-neck and breast like color of back, but lighter; the color distributed centrally from the feathers, giving a faintly streaked appearance; remaining underparts white, or with a few gray streaks on sides; bill longer, stout, slightly curved near tip, black; feet and legs black. *Adult in summer*: Upperparts black centrally with broad margining of bright rusty ochraceous; wings as before; breast, etc., grayish white, faintly streaked with dusky; belly black, strongly contrasting with breast; crissum, etc., white. *Immature*: "Upperparts blackish, the feathers with rounded tips of rufous or buff; belly spotted with black" (Chapman). Length "7.00-8.75" (193-222.3); wing 4.70 (119.4); tail 2.29 (58.2); bill 1.50 (38.1); tarsus .90 (25.2).

Recognition Marks.—Chewink size (considerably under Killdeer size); bright rufous of back and black of belly of breeding plumage distinctive; soft brownish gray of upperparts and breast; rather long black bill, slightly curved near tip, distinctive for plumage commonly seen.

Nesting.—Does not breed in Washington. *Nest*: on the ground. *Eggs*: 4, dull brownish buff, or clay color ("bluish-white to ochraceous-buff"—Chapman), spotted, blotched and stained, chiefly about the larger end, with chestnut and chocolate. Av. size, 1.43 x 1.01 (36.3 x 25.7).

General Range.—North America in general, breeding far north. Eastern Asia.

Range in Washington.—Common during migrations, and occasionally resident in winter on the West-side.

Authorities.—*Tringa alpina* var. *americana*, Cass., **Baird**, Rep. Pac. R. R. Surv. IX., p. 720. T. C&S. L^t. Rh. B. E.

Specimens.—(U. of W.) Prov. P^t. B. E.

AFTER the Western (*Ereunetes mauri*), this is perhaps the commonest Sandpiper along our coasts. Altho considerably larger than the Western, it also is called "Peep," and it shares several characteristics with its smaller kinsmen. For one thing, they are all fond of a ride. A floating log often proves an irresistible temptation to a passing flock, and they settle down upon it teetering and peeping lustily, as tho it were the greatest treat imaginable. Even more ludicrous it is to see a great company of Sandpipers together with a few solemn gulls seated on the rear end of a moving log-boom. The conveying tug puffs officiously, while the water swirls away behind in dizzying eddies. But there is a hundred yards of stout cable and it may be a two hundred yard stretch of logs between the birds and the boat; so these urchins gather fearlessly and snicker over their good fortune in stealing a ride. A passenger on a passing steamer, catching the drollery of the thing, feels like bawling out, "Hey, Mister! Cut behind!"

The Red-backs are to be found on the beaches and salt marshes of Puget Sound, Gray's Harbor, and the Pacific Coast at any time of year save June and July, when they are at home in Alaska. They are, however, not common in winter, and the migratory movements may be distinctly traced. The birds

are in high plumage during the spring migrations, and they not infrequently return to our borders before having exchanged the nuptial dress for the prosy grays of winter. This species also wanders largely into the interior, and stray birds may be picked up in almost any situation which provides water.

In feeding, the Red-backs usually maintain close order, and in flight as well, so that hostile fire is very destructive to their ranks. One shot seldom suffices to teach its lesson of caution, and they are back again the next minute to look after their fallen comrades, and to invite repeated slaughter. Suckley tells of an army officer of his acquaintance who once tumbled ninety-six birds at a single discharge of his fowling piece. It is perhaps needless to add that there arn't enough birds to go around at that rate.

Suckley recorded this species as "resident thruout the year," but it is highly improbable that it has nested so far south within historic times. Mr. E. W. Nelson enjoyed unique opportunities at the mouth of the Yukon in the Seventies, and he says of these birds: "Soon after they arrive in spring they are engaged in pairing, and the male may be seen upon quivering wing flying after the female and uttering a musical, trilling note, which falls upon the ear like the mellow tinkle of large water-drops falling rapidly into a partly filled vessel. Imagine the sounds thus produced by the water run together into a steady and rapid trill some five or ten seconds in length, and the note of this Sandpiper is represented. It is not loud, but has a rich, full tone difficult to describe, but pleasant to hear among the discordant notes of the various water-fowl whose hoarse cries arise on all sides. As the lover's suit approaches its end, the handsome suitor becomes exalted, and in his moments of excitement he rises fifteen or twenty yards, and hovering on tremulous wings over the object of his passion, pours forth a perfect gush of music, until he glides back to earth exhausted, but ready to repeat the effort a few minutes later."

No. 265.

SEMIPALMATED SANDPIPER.

A. O. U. No. 246. *Ereunetes pusillus* (Linn.).

Synonyms.—PEEP. SAND-PEEP. OX-EYE.

Description.—*Adult in summer:* Above blackish or fuscous, with much brownish gray and some whitish or pale rusty edging; darker on crown and back, lighter on neck and wings; tips of greater coverts white, rump grayish brown; upper tail-coverts and central tail-feathers dusky; remaining tail-feathers ashy gray; a white superciliary line, and a dusky line from bill to eye; underparts white, except across breast, where tinged with brownish gray, and distinctly streaked with dusky brown; bill and feet dark brown. *Adult in winter:* Above plain, brownish gray, with darker shaft-streaks or central areas; below pure white.

marked, if at all, with faint streaks on sides of breast. *Immature*: Similar to adult in summer, but feathers of back and scapulars rounded, and with conspicuous edgings of pale rufous and white; breast tinged with buff, and faintly streaked on sides only. Length 5.50-6.75 (139.7-171.5); wing 3.67 (93.2); tail 1.60 (40.6); tarsus .82 (20.8); bill .80 (20.3), that of female averaging .10 longer than bill of male.

Recognition Marks.—Sparrow size; a little larger than *Pisobia minutilla*, from which it may be distinguished by longer, stouter bill, somewhat lighter coloration of back, clearer white below, with streaked area of breast not so extensive;—partial webbing of feet, of course, distinctive. Not so brightly colored as next in summer and with shorter bill.

Nesting.—Does not breed in Washington. *Nest*: on the ground, a slight depression, scantily lined with grass. *Eggs*: 3 or 4, grayish buff, greenish drab, or olive, finely speckled or spotted with dark brown or obscure lilac. Av. size, 1.23 x .85 (31.2 x 21.6).

General Range.—Breeding from Labrador to Alaska; migrating thru Eastern and Central States, west regularly to Rocky Mountains, sparingly to the Pacific Coast; south in winter to West Indies and northern South America.

Range in Washington.—Of limited but regular occurrence during migration.

Authorities.—Jones and Dawson, Wilson Bulletin No. 33, p. 21.

Specimens.—Prov.

SAND-PEEPS make quick friends with any of their kind, and it is not surprising that this "species" which belongs further east, should be overpersuaded now and then by the loyal westerners to continue with them down our coast. Moreover, the passed masters in the science of ornithology cannot give a clear account of the differences alleged to exist between *pusillus* and *mauri*, let alone convince us of their specific difference. Sakes alive! if we were as fussy in anthropology as in ornithology, we should have to class auburn-haired folk as *Homo ignicomans* instead of *Homo sapiens*, which they most pre-eminently are—not to mention *pulcher*.

No. 266.

WESTERN SANDPIPER.

A. O. U. No. 247. *Ereunetes mauri* Cabanis.

Synonym.—WESTERN SEMIPALMATED SANDPIPER.

Description.—*Adults*: Very similar to preceding species, but bill averaging longer and color pattern of upperparts more pronounced, bright chestnut and black where *E. pusillus* is pale rusty and blackish; chest more heavily streaked with blackish, and with a few specks of the same on sides. In general, therefore, a more vigorous type, but specific distinction dubious. Length of bill in adult

male, .85-.95 (21.6-24.1); average .88 (22.4); female, 1.00-1.15 (25.4-29.2), average 1.05 (26.7).

Recognition Marks.—Like preceding, but brighter (in summer plumage), and with bill averaging longer, that of male averaging longer than that of female *pusillus*.

General Range.—Breeding in Alaska and migrating chiefly thru western United States to Central and South America. Casually eastward to Atlantic Coast during migration.

Range in Washington.—Common during migrations thruout the State; sometimes abundant on Puget Sound and western coast. Irregularly resident in winter on Puget Sound. Also non-breeding birds present thruout the year.

Migrations.—Northward movement continuous to middle of May or later; southward movement sets in about July 4th.

Authorities.—Lawrence, Auk, Vol. IX. Jan. 1892, p. 43^a. (T). L¹. Rh. Kk. B. E.

Specimens.—(U. of W.) Prov. P. B. E.

THESE birds, with an indeterminable percentage of Least Sandpipers (*Pisobia minutilla*), and a possible admixture of Semipalmateds, constitute the immense flocks of "Sand-peeps," which probably exceed in number all other shore birds combined. One somehow gets the impression that they are always with us, but the few which linger thru June are unquestionably non-breeding birds. By the 10th of July little wisps of peeps come drifting southward along the Pacific shore, stopping every half mile or so for refreshments, whether upon the sand beaches or upon the barnacle-covered rocks. One may encounter a hundred flocks a day at this season, and yet, curiously enough, find none containing over a hundred birds, or such a matter. Many spots on Puget Sound, however, present more permanent attractions, and the birds will assemble to the number of thousands in certain bays which boast abundant tributary flats of mud and sand.

Thus in August, 1905, the Drayton Harbor population numbered some 5,000 birds. This little army fed regularly at low tide along the California Creek flats or in the protected area of Blaine. At high tide, they were to be found resting with the gulls upon the pile booms which lay at anchor on the lee of Semiahmoo spit. By January of the following year the company had been reduced to about one-third of its former dimensions, whether thru the defection of those who favored wintering in California, or because of incessant persecution, I cannot say.

No better opportunity is afforded to study and speculate upon the mystery of flock movement than in the case of these gentle peeps. In flock flight they weave and twist about, now flashing in the sunlight, now darkening to invisibility, charge and recharge, feint and flee, all as a single bird. And be-

a. It is incredible that Cooper and Suckley should not have seen this bird, but they evidently let it pass as *Pisobia minutilla*.

cause they keep up a dainty chattering, like a fairy rattle-box, one cannot decide whose voice in the babel has authority. Upon alighting, they first pause in absolute silence, absurd little Platos, done in plaster and sown broadcast over the sand-scape. This, that they may note whether their coming may have provoked hostile notice. Reassured upon this point, they become animated, and begin to patter and pick and probe and peep, as tho there were nothing else in life. There is something so detached about their happy chatter, that the bird-man feels like an uninvited cow whose bulking presence the banqueting



Taken in Clallam County.

Photo by the Author.

WESTERN SANDPIPERS.

fairies are politely minded to ignore. The flock moves slowly forward and successive platoons rising from the devastated rear pass over their fellows to take turns at the front. All is as merry as wedding bells, and the bird-man with his camera is trembling with excitement. But suddenly one of the little soldiers is smitten with a fear-thought. Like an electric flash it is communicated to all his comrades. Instantly, in the dreadful hush which follows, the flock takes wing as one bird, and they pass out of hearing arguing excitedly. Ten to one, after they have swept the horizon two or three times, the panicky mem-

ber is outvoted, and the Peeps troop back confidently to resume the pastures which they have just deserted.

Nothing, to my mind, could exceed the flattery implied by the near approach of these trustful creatures. If the compliment were really deserved, the cunning little souls would undoubtedly respond to the most familiar advances short of actual handling. Slaughter in the name of science may still be justifiable, tho there be those of us who have passed up the solution of many nice problems here; but slaughter of these innocents in the name of



Taken at La Push.

Photo by the Author.

THE BANQUETING FAIRIES.

sport is mere Philistinism. The Italian method of hunting is to shoot everything in sight. As a result sunny Italy is a birdless desert in summer, and a nightmare during migrations.

The Alaskan tundras are the summer home of our little guest, and we may perhaps be interested to follow him with Mr. Nelson's eyes: "The warm days toward the close of May cause the brown slopes and flats to assume a shade of green, and among the many pretty bird-romances going on under our eyes none is more charming than the courtship of this delicate Sandpiper. They have forsaken the borders of icy pools, and, in twos and threes, are

found scattered over the tundra, showing a preference for small dry knolls and the drier tussock-covered parts of the country in the vicinity of damp spots and small ponds. Here the gentle birds may be seen at all times tripping daintily over the moss or in and out among the tufts of grass, conversing with each other in low, pleasant, twittering notes, and never showing any sign of the wrangling so frequent with their kind at this season. The female modestly avoids the male as he pays his homage, running back and forth before her as tho anxious to exhibit his tiny form to the best advantage. At times his heart beats high with pride and he trails his wings, elevates and partly spreads his tail, and struts in front of his lady fair in all the pompous vanity of a pygmy turkey-cock; or his blood courses in a fiery stream until, filled with ecstatic



Photo by the Author.

THE GLEANERS.

joy, the sanguine lover springs from earth, and rising upon vibrating wings, some ten or fifteen yards, he poises, hovering in the same position, while he pours forth a rapid, uniform series of somewhat musical trills, which vary in strength as they gradually rise and fall, producing pleasant cadences. The wings of the songster meanwhile vibrate with such rapid motion that they appear to keep time with the rapidly trilling notes, which can only be likened to the running down of a small spring and may be represented by the syllables *tsur-r-c-c-c*, *sr-c-c-c*, *sr-c-c-c*, in a fine high-pitched tone with an impetus at each 'z.' This part of the song ended, the bird raises its wings above its back, thus forming a V, and glides slowly to the ground, uttering at the same time, in a trill, but with deeper and richer tone, a series of notes which may be likened to the syllables *tsur-r-r-r*, *tsur-r-r-r*."

No. 267.

SANDERLING.

A. O. U. No. 248. *Calidris leucophæa* (Pallas).

Description.—*Adult in summer:* Crown and upperparts in general blackish with heavy edging of ashy white, and with much striping, sub-marginal marking, or indenting and barring, of pale rufous; sides of head, throat, and neck all around, and sides of breast ashy white, strongly tinted with pale rufous, and finely spotted with dusky; remaining underparts pure white,—the white well up on sides of rump, and including outer feathers of upper tail-coverts; wings, marginally, and including exposed portions of quills, fuscous; the greater coverts tipped with white, and the wing-quills changing to white on their inner webs and under surfaces; the inner primaries white basally on outer webs; tail dusky above, ashy gray on lateral feathers; bill and feet black. *Adult in winter:* Wings dusky, varied, on middle coverts, etc., with white; central upper tail-coverts and tail-feathers dusky; remaining upperparts ashy gray (nearly pearl gray); the feathers, especially on crown, with dusky shaft-lines; entire underparts pure white. *Immature in fall:* Somewhat like adult in summer, but without rufous anywhere; back, therefore, showing more black, varied chiefly by white in scant edgings and tips, or in liberal indentations on scapulars and tertials; feathers of rump nearly square-ended, marked subterminally with light ashy gray, but tipped with a sharp, narrow band of blackish; underparts white,—or sometimes spotted on breast. Length 7.00-8.75 (177.8-222.3); wing 4.82 (122.4); tail 2.11 (53.6); bill 1.06 (26.9); tarsus 1.02 (25.9).

Recognition Marks.—Chewink size; fine, mottled rufous-ash and black of spring birds; excess of white in fall specimens; black bill, strongly contrasting with adjacent plumage. Absence of hind toe, of course, distinctive.

Nesting.—Does not breed in Washington. *Nest:* on the ground. *Eggs:* 3 or 4, light olive, or greenish brown, finely speckled and spotted with dark brown, chiefly about larger end. Av. size, 1.41 x .91 (35.8 x 23.1).

General Range.—Nearly cosmopolitan, breeding in the Arctic and subarctic regions; migrating in America south to Chili and Patagonia.

Range in Washington.—Rare migrant west of the Cascades only (Blaine, Sept. 1, 1904).

Authorities.—*Calidris arenaria* (Linn.), **Baird**, Rep. Pac. R. R. Surv. IX., 1858, p. 724.

Specimens.—(U. of W.) Prov. B.

THERE is a tide in the affairs of the Sanderling which, taken at the ebb, provides a momentary fortune of stranded crustaceans and marine insects. The bird follows the retiring billows with uplifted wing, quick to seize upon the wave's disclosures, and ready at a sign to avoid the return of the fickle water. It is thus that we find him in May, and again late in August or September, along the Pacific shore and about the flats and inlets of Puget Sound

The birds occasionally occur in considerable flocks of their own kind, which deploy and feed silently at the water's edge; but oftener single individuals, or perhaps a half dozen, are found associated with Western Sandpipers or Semipalmated Plovers. In the latter case they may be readily distinguished by their larger size, and, in the fall, by their lighter color. At high tide they sometimes resort to kelp-beds or log-booms, and they are pretty likely to occur, also, along the gravelly shores of the Columbia and Snake Rivers.

Sanderlings appear to be very graceful birds, when their movements are unconstrained by the knowledge of man's presence. When approached, however, the flock will stand silent, viewing your actions with grave regard. Even tho' partially reassured as to your intent, their remaining movements are apt to be halting—with only one eye spared for bug-catching; and the strain is relieved only when the whole company takes sudden flight with sharp whistling cries:

"Friend, if friend you be,
The world is wide,
If you tent here,—
Why yonder does for me."

No. 268.

MARBLED GODWIT.

A. O. U. No. 249. **Limosa fedoa** (Linn.).

Synonyms.—BROWN MARLIN. COMMON MARLIN. SPIKE-BILLED CURLEW.

Description.—*Adult*: General color pale cinnamon or ochraceous-buff; the head and neck all around streaked and spotted with brownish dusky; the back, etc., heavily and irregularly barred with the same,—a typical feather from the scapulars has a broad dusky center shaped like a dandelion leaf, the complementary spaces being ochraceous-buff, or irregularly white; the primary coverts, and outer webs of three outer primaries brownish dusky; the breast (especially on sides), the sides, flanks, and lower tail-coverts, with fine wavy bars of dusky; the superciliary line and throat immaculate; the axillars and lining of wings darker,—say pale cinnamon-rufous; bill, slightly upturned, yellow at base, blackening toward tip; feet and legs blackish. *Immature*: Similar to adult, but immaculate on breast; sides and flanks less distinctly and extensively barred. Length 16.50-21.00 (419.1-533.4); wing 9.15 (232.4); tail 3.13 (79.5); bill 4.28 (108.7); tarsus 2.74 (69.6).

Recognition Marks.—Crow size; large size; long, slightly upturned bill; pale cinnamon coloration; "marbled" appearance of upperparts.

Nesting.—Not known to breed in Washington. *Nest*: on the ground. *Eggs*: 3 or 4, light olive-brown, finely speckled and spotted with dark brown and purplish gray. Av. size, 2.18 x 1.64 (55.4 x 41.7).

General Range.—North America, breeding in the interior (from Iowa and Nebraska northward to Manitoba and the Saskatchewan). Migrating in winter to Guatemala, Yucatan, etc., and Cuba.

Range in Washington.—Rare migrant along the coast. No recent records.

Authorities.—Newberry, Rep. Pac. R. R. Surv. VI., Pt. IV., 1857, p. 100. T. C&S.

Specimens.—Prov. C.

"THE Marbled Godwit frequents Shoalwater bay in immense flocks during spring and fall, a few remaining all winter. The first flocks of young birds arrive from the north in July, but I think none breed in the Territory. They frequent during their stay, soft mud flats, which are extensive in the bay, feeding at low tide during either day or night. At high water they sit concealed by the grass, always at a distance from woods or other concealment of their enemies, and are consequently very difficult to approach, being watchful and shy at all times. Along the gravelly steep shores of the upper part of Puget Sound they rarely appear. In the beginning of May they leave for their northern breeding grounds. I have examined large numbers, and have never identified more than one species in the Territory. The name of 'curlew' is commonly but wrongly given them."

The foregoing paragraph, penned by Dr. Cooper more than fifty years ago, fairly summarizes our present knowledge of the Marbled Godwit in Washington. They are presumably still common along the Pacific coast during migrations, for Mr. A. W. Anthony finds them so along the Oregon coast. The bird does not go far north, for it is unknown in Alaska. John Fannin notes its occurrence thruout the whole of British Columbia, but says that it breeds chiefly east of the Cascades. There is no reason why it should not be found likewise in eastern Washington, since it is known to breed as far south as Nebraska.

No. 269.

GREATER YELLOW-LEGS.

A. O. U. No. 254. **Totanus melanoleucus** (Gmel.).

Synonyms.—LONG-LEGGED TATTLER. STONE SNIPE.

Description.—*Adult in summer:* Above dusky or blackish gray; streaked on the head and neck, and spotted on the edges of feathers of back, scapulars, etc., with white; edge of wing, and quills plain dusky; the upper tail-coverts white, narrowly barred on terminal portions with dusky; tail narrowly barred dusky and white, the central feathers darker; underparts white, the fore-neck and breast heavily spotted and streaked, and the sides barred with dusky; "bill straight or slightly inclined upward, not with regular curve, but as if bent near the middle, black or greenish black"; feet and legs bright yellow. *Adult in winter:* Upper-

parts fuscous, or light grayish brown, the anterior portions whitish-edged, and whitish-tipped; feathers of back, etc., with spots or incipient bars of dusky and white on edges; margining of underparts not so heavy. *Immature*: Like adult in winter, but darker above, the white spotting with some admixture of brownish buff. Length about 14.00 (355.6); wing 7.60 (193); tail 3.11 (79); bill 2.15 (54.6); tarsus 2.40 (61).

Recognition Marks.—Little Hawk size; long yellow legs; *white upper tail-coverts*, with sober dusky and white coloration, distinctive for size; *Tew, tew, tew*, notes.

Nesting.—Not known to breed in Washington. *Nest*: on the ground. *Eggs*: 3 or 4, "brownish buffy, distinctly but very irregularly spotted with rich Vandyke or madder brown." Av. size, 1.43 x 1.20 (36.3 x 30.5).

General Range.—America in general, breeding from Iowa and northern Illinois, etc., northward, and migrating south to Chili and Argentine Republic.

Range in Washington.—Fairly common during the migrations over the entire State.

Authorities.—*Gambetta melanoleuca* (Gm.) Bon., **Baird**, Rep. Pac. R. R. Surv. IX., 1858, p. 732. C&S. L². Rh. D¹. D². B. E.

Specimens.—(U. of W.) Prov. P. B. E.

WHILE most Sandpipers indulge in a conversational twitter, or low musical piping, they are usually content to reserve their serious vocal efforts for the Northland and the nesting time. Not so with this bustling Tell-tale; he must needs proclaim his presence loudly wherever found. And not only so, but he takes such pains to publish by his distrustful notes the movements of the hunter, that he gets himself cordially disliked and numerously assassinated. While no longer common, the impression of abundance is sustained by the restless noisy ways of these Tattlers, so that if there be a single bird about a horse-pond, the whole country-side is likely to know of it. The birds frequent not only tide flats and salt water marshes, but duck ponds, upland pools, and river bars as well. Sometimes they move uneasily from one part of the pond to another, as tho discontented with the fare offered; and at all times, with reason or without it, they utter their high querulous notes, *tew tew tew, tew tew tew*,—always in groups of three. The notes are vigorous and penetrating as well as petulant, but no one save the hunter need resent them.

While feeding, the Tattler wades about, knee-deep, snatching its food from the surface of the water, or else thrusting its head below for a quick search along the bottom. At such times it may be very alert or quite unwary according to the amount of persecution it has previously endured. By the side of a farmyard pond I once watched a bird which seemed rather to enjoy company, so long as you didn't actually step on him. With immaculate undergarments rolled tightly above each knee (or heel, if you insist on anatomical correctness), he would adventure to wade around you rather than to fly out

of your way. At other times one cannot get within a hundred yards of them.

During the migrations the Yellow-legs appear singly as often as in small flocks. The fall movement, which sets in by the middle of August, or even earlier, is a little more leisurely than that of spring, inasmuch as the bird's business is less urgent; and because of the year's increase they are noticeably more numerous in autumn. A few winter with us, but South America is the normal winter home of the species. In far-off Argentina, the birds are said to mingle for a time with those members of their race which constitute a southern division, and which must soon be leaving for their breeding haunts within the Antarctic Circle.

There are no records of the Telltale's nesting in this State, but it may do so. Mr. Samuel N. Rhoads, in 1892, found them breeding about inland lakes in British Columbia as far south as Clinton (Lat. 51°). "At this season both sexes stand sentinel on the tops of trees in the vicinity of the nest, rarely alighting on the ground during the presence of an intruder. The newly fledged young often follow the example of their parents in this respect. From this position the male keeps up an incessant clamor thruout the day. One series of notes, uttered only during periods of fancied security, is peculiar and unquestionably a love song."^a

No. 270.

LESSER YELLOW-LEGS.

A. O. U. No. 255. *Totanus flavipes* (Gmel.).

Synonyms.—TATTLER. LESSER TATTLER. COMMON YELLOW-LEGS. LESSER YELLOW-LEGS. YELLOW-SHANKS TATTLER. TELL-TALE.

Description.—*Adult in summer:* Head and neck all around (save throat), and breast, finely streaked with dusky, on white or ashy-white ground, the markings on the sides of breast broader and heavier, passing into loose and rather indistinct bars on sides; remaining underparts white; back and upperparts in general light brownish gray, tinging also hind-neck and crown; feathers of back and scapulars with blackish centers, and irregular spotting of ashy white; the larger feathers, especially tertials, with incomplete black bars; primaries dusky; the secondaries with narrow edging of white; upper tail-coverts white, the terminal portion of feathers dusky-barred; tail white or ashy gray, centrally, barred with dusky; bill and feet as in preceding species. *Winter plumage:* Above light brownish gray, with some darker shaft-lines, and considerable white spotting on edges of feathers; markings of neck and underparts much paler, grayish brown,

a. Proc. Acad. Nat. Sci. Phila., 1893, p. 36.

partially obscured or blended. Length about 10.50 (260.7); wing, 6.11 (155.2); tail 2.36 (59.9); bill 1.46 (37.1); tarsus 1.08 (50.3).

Recognition Marks.—Killdeer size; like preceding species but smaller.

Nesting.—Does not breed in Washington. *Eggs*: 3-4, buffy (variable as to shade), distinctly (sometimes broadly) spotted or blotched with dark madder or Vandyke brown and purplish gray. Av. size, 1.60 x 1.15 (42.9 x 29.2).

General Range.—America in general, breeding in the cold temperate and subarctic districts, and migrating south in winter to southern South America. Less common in western than in eastern North America.

Range in Washington.—Occasional during migrations.

Authorities.—Rhoads, Auk, N., Jan. 1893, p. 17.

Specimens.—Prov.

FOR some unaccountable reason this species was not listed by Cooper and Suckley, altho it had been noted as a bird "found in the Territory of the Oregon" by J. K. Townsend, in 1839. The fact is, some confusion has always existed between this bird and its larger congener, *T. melanoleucus*, and it is probably not so rare as its omission from state lists would indicate. My own records are "early" and therefore a little hazy. But Fannin notes it as tolerably common thruout the province of British Columbia, and says that it winters on the Coast, while Allan Brooks has taken it at Chilliwack and Okanagan.

Altho not solitary by preference, these little Tattlers are rather independent, and I have seen single individuals, or twos and threes, quite as often as larger flocks. They do mingle freely with other species upon occasion, but when frightened from their feeding grounds are apt to draw off by themselves again.

The most prominent characteristic of these birds as they flutter about from place to place, or rise for extended flight, is the tail appearing almost white—for the cross-barring of the tail-feathers, while apparent enough in the hand, is scarcely noticeable at a distance. Upon alighting, the bird remains a moment with wings held daintily aloft, and, if reassured, folds them quietly, one at a time, like a yacht hauling in sail, or simultaneously, as the case may be. On foot it is often restless, bobbing or teetering with nervous apprehension, and serving frequent notice of its readiness for departure. As tho conscious, however, of its own preparedness, it will often suffer a much nearer approach than most other species of waders.

The notes of the Lesser Yellow-legs are much like those of the preceding species, but are lighter in character.

No. 271.

WESTERN SOLITARY SANDPIPER.

A. O. U. No. 256. *Helodromas solitarius cinnamomeus* (Brewster).

Description.—*Adult in summer:* Above, olive-brown or fuscous, with a faint greenish tinge, blackening on wings; the head and neck finely streaked, and the back, etc., distinctly speckled with whitish, buffy or pale cinnamon; upper tail-coverts dusky, the lateral feathers spotted or barred with white; central tail-feathers dusky, spotted on edges with white; the remaining feathers of tail white, with heavy dusky bars; underparts white, the sides of neck and breast and across chest streaked with fuscous; axillars prominent, white, barred with dusky; bill blackish; feet and legs dull greenish black. *Winter plumage:* Colors more blended; olivaceous tinge of upperparts nearly wanting; whitish spotting less pure; head and neck less distinctly streaked with light grayish brown. *Immature:* Like adult in winter, but colors still more blended; no streakings on head and neck; spotting of back buffy. Length 7.50-8.50 (190.5-215.9); wing 5.04 (128); tail 2.08 (52.8); bill 1.13 (28.7); tarsus 1.18 (30).

Recognition Marks.—Chewink size; olive-brown with white speckling. To be carefully distinguished from *Actitis macularia* by its somewhat larger size and slimmer build, as well as by the absence of spotting on the belly. *Wet, wet* note a little sharper than that of *A. macularia*.

Nesting.—Not known to breed in Washington, but probably does so. *Nest:* on the ground. *Eggs:* 4 or 5, faint dark reddish fading to light drab or clay color, spotted, blotched, and scrawled with brown, and with faint purplish shell markings on the larger end. Av. size, 1.39 x .95 (35.3 x 24.1). Also described as nesting in deserted nests of other birds, as Olive-backed Thrush, Rusty Grackle, etc., after the well authenticated custom of *H. ochropus* of Europe.

General Range.—Western North America east to the Plains, but chiefly coastwise; south in winter to Lower California and beyond.

Range in Washington.—Imperfectly made out. All references to *typicus* are placed here, but there are no contemporary specimens from Washington.

Authorities.—*Rhyacophilus solitarius* (Wils.) Bon., **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 734. C&S. 242. [D^r. Incorrect.] Jones, Wilson Bulletin, No. 33, p. 27.

Specimens.—Prov.

"It is neither because of excessive fear nor hauteur that birds of this species are not often found mingling with others of the Sandpiper kind, but only because they appreciate the beauty of woodsy pools and upland plashes, which is lost on their more gregarious fellows. A Solitary Sandpiper is most nearly comparable to the Spotted Sandpiper, but is larger, slimmer, trimmer (if possible), with a voice a little higher-pitched and thinner. These differences are easily made out if one is so fortunate as to see the birds together. At a time when the distinctive points

of this species were only beginning to emerge in the consciousness of the student. I once came upon a Solitary Sandpiper feeding at the edge of a brick-yard pond, in company with a single Spotted and an equally solitary Pectoral Sandpiper. There were no other shore birds of any species within a mile; but these three were not above five feet apart, having been led into a momentary association thru some subtle sense of kinship and recognition of common ends. When the observer had conned well the lesson of comparative limicology there afforded, he put the birds to flight. They fled three ways with characteristic cries and never an afterthought, apparently, for their chance acquaintances.

"If one happens upon half a dozen of these birds feeding beside a leaf-lined pool in the depths of the woods, he may not only see a beautiful sight, but one out of the ordinary in Sandpiper experiences. The birds dart about rapidly, capturing not only slugs, worms, and small crustaceans, but insects as well. Indeed, the wings at times are carried about half-raised, as tho the bird were on the very point of flight; and quick sallies are made at passing moths and beetles. If a decaying log lies half submerged it is sure to be inspected from every point of vantage; and the bird is not averse to alighting, on occasion, upon the limb of a convenient tree. Again the bird plashes about freely upon the floating vegetation, or wades breast deep, taking care, however, that its dainty white bodice shall not be soiled. At other times, perhaps, it moves with the sedateness of a heron, putting each foot down carefully so as not to soil the water" (*The Birds of Ohio*).

Dr. Suckley said, "The Solitary Sandpiper is not rare about Puget Sound," but his experience seems to have contradicted that of every recent observer. The name does not appear upon any local list since published, and I have myself seen the bird only once, at Blaine, in the summer of 1900.

No. 272.

WESTERN WILLET.

A. O. U. No. 258a. **Catoptrophorus semipalmatus inornatus** (Brewst.).

Synonyms.—SEMI-PALMATED TATTLER. STONE CURLEW.

Description.—*Adult in summer:* Above brownish gray, the head and neck streaked with dusky, the feathers of back, etc., with irregular bars, or central patches, of dusky, and further varied with some obscure buff; primaries and secondaries white, the former broadly tipped and the latter slightly tinged with dusky; upper tail-coverts white, or with a few dusky bars; central tail-feathers ashy gray, sometimes faintly barred with blackish; the remaining feathers white mottled with ashy; underparts chiefly whitish, clearest on belly, tinged with buffy

or pale salmon on breast and sides, where irregularly barred with dusky; throat streaked with dusky; axillars and lining of wing dusky; bill dusky; feet and legs dark bluish. *Winter plumage*: Above ashy gray, lighter on neck; below white unmarked, the fore-neck gray-tinged. *Immature*: Like adult in winter, but feathers of back edged with pale ochraceous; below tinged or faintly mottled with brownish gray on neck, chest, and sides; otherwise unmarked. Length about 17.00 (431.8); wing 8.10 (205.7); tail 3.30 (83.8); bill 2.45 (62.2); tarsus 2.65 (67.3).

Recognition Marks.—Crow or Curlew size; extensive white on wing with large size distinctive; semipalmate feet.

Nesting.—Not known to breed in Washington, but probably does so. *Nest*: on the ground or in grass tussock, of grass and weed-stalks. *Eggs*: 4, greenish white to dark olive, spotted boldly with various shades of umber-brown, and with obscure purplish shell markings. Av. size, 2.10 x 1.55 (53.3 x 39.4).

General Range.—Western North America north to Latitude 56°, breeding from Manitoba and Alberta south to the Gulf coast of Texas; south in winter to Mexico. Casual east of the Mississippi during migrations.

Range in Washington.—Casual during migrations. Reported from coast line only.

Authorities.—[C&S. 241. Not a valid Washington record.] [“Willet,” Johnson, Rep. Gov. W. T. 1884 (1885), 23.] **Hubbard**, Zoe, III, July, 1892, p. 143. Two specimens taken off Dungeness, Sept. 1905, by L. R. Reynolds. T.

PROMINENT wherever found by reason of its restlessness and noisiness, the Willet has drawn the fire of the country-side, until now it is quite unknown in sections where it was formerly abundant. It was never common in Washington, however, and our knowledge of its presence is confined to reports from gunners who have encountered it upon the beaches in the seasons of migration. Thus, Mr. L. R. Reynolds secured two specimens at Dungeness in September, 1905. The range of the species being rather southerly, those which occur here may be looked upon as stragglers and adventurers, rather than as regular migrants.

The Willet is described as an exceedingly noisy bird, filling the air with its shrill cries of *pill-will-willit*, *will-willit*, *pill-will-willit*, at all hours of the day and often at night. Except during the breeding season, it is quite wary, and difficult to approach even by stealth. While nesting, however, it becomes silent and nearly impassive, except when its nest or young are immediately threatened, in which case it throws reserve to the wind and summons its neighbors, who join with it in the boldest denunciation of the intruder.

No. 273.

WANDERING TATTLER.

A. O. U. No. 259. *Heteractitis incanus* (Gmel.).

Description.—*Adult in summer:* Above uniform dark plumbeous, or slaty gray; a white superciliary; shaft of first primary chiefly white; underparts basally white, heavily shaded or barred across upper breast and on sides with color of back; axillars and wing-linings, likewise, plumbeous; fore-neck heavily speckled and remaining underparts barred with plumbeous dusky. *Adults in winter:* Similar but more extensively white below; leaden-gray admixture everywhere blended, heaviest on cheeks and sides of breast. *Immature:* Like adult in winter, but scapulars, tertials, and upper tail-coverts indistinctly spotted with white, and sides faintly mottled with white. Length about 11.00 (279.4); wing 6.75 (171.5); tail 3.00 (76.2); bill 1.55 (39.4); tarsus 1.30 (33).

Recognition Marks.—Robin size; Killdeer size; leaden gray coloration distinctive; *tew tew* notes; frequents rocky shores.

Nest and *Eggs* unknown.

General Range.—Pacific coast of America, from Norton Sound, Alaska, to the Galapagos, and west to Kamchatka and Hawaiian Islands; also the more eastern island groups of Polynesia.

Range in Washington.—Regular migrant and possibly summer resident on the West Coast (Cape Elizabeth, July 14, 1906).

Authorities.—*Heteroscelus brevipes* (Vieill.) Baird, **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 735. C&S.

Specimens.—Prov. C. D.

TO christen a bird "wandering" is to make all bird-men godfathers in interest; for what about any bird more captivates the imagination than its disposition, and ability, to wander? This Tattler should be the patron saint and emblem of all who love the wild, and especially of those who, having once been upon the bosom of the broad Pacific, feel evermore the ebb and flow of salt water in their veins. Attu, Shamsu, Baranoff, Laysan, Marcus Island, Odgovigamut—these are all the same to *H. incanus*. His grip is always packed and his ticket always purchased for whatever clime, rock, or strand he takes a fancy to. Nor need he travel *all* alone. "What say, dear, shall it be the Shumagins this summer? or a little cabin on the Tschuktschi?" There is a proposal *à la mode* for you, and the heart grows faint with desire to follow.

The Wandering Tattler is known to summer in Alaska, and is supposed to breed in the vicinity of interior lakes and streams, but its nest has not yet been taken. During migrations the bird touches only the seacoast, visiting us in May and returning sometimes as early as July. It haunts the barnacle-covered rocks and tide-swept reefs, and itself appears but a detached fragment of their

somber substance. When frightened the bird flushes with a quavering cry, somewhat like the *teu teu teu* of the Greater Yellow-legs (*Totanus melanoleucus*), but more subdued; and when it alights it sits for some time motionless in a plover-like attitude, with its long bill held horizontally, invisible in the dull light of a foggy day unless, perchance, outlined against the surf.



Photo by the Author.

LA PUSH.

THE HOME OF THE QUILLAYUTE INDIANS, ON THE WEST COAST OF WASHINGTON.

The Quillayute Indians know the bird as *Teteyeteyoos*, and insist that it summers upon our coast, but I cannot find anyone who will certify to having seen its eggs. I took an adult specimen at Cape Elizabeth on the 14th of July, 1906, and Mr. Bowles another at Moclips on the 25th of August, 1907. Cooper says also: "On the first of May, 1854, I shot a pair, the first I had seen, at Shoalwater bay, and during the month saw two other pairs. Each pair were mates and did not associate with any other shore birds."

No. 274.

BARTRAMIAN SANDPIPER.

A. O. U. No. 261. **Bartramia longicauda** (Bechst.).**Synonyms.**—"THE BARTRAMIAN." UPLAND PLOVER. FIELD PLOVER.

Description.—*Adult*: Above, varied brown or dusky with a slight olive tinge, the feathers edged with ochraceous-buff, and on the back, etc., spotted and barred with black; top of head blackish, parted by indistinct buffy median line; hind-neck buffy or ochraceous, streaked with dusky; primaries dusky, the outer one with a white shaft, and white strongly barred with dusky on the inner web; tail irregularly barred with black, the central feather olive-dusky, the outer ones ochraceous and gray; underparts whitish or with buffy tinge on breast, sides, and crissum; the fore-neck sharply streaked with brownish dusky; the markings U- or V-shaped on breast and opening out into bars on the sides; axillars and lining of wings finely barred dusky and white; bill yellow, blackening on ridge and tip; feet and legs dull yellow. *Immature*: Similar to adult, but buffy and ochraceous stronger, and dusky markings of underparts less distinct. Length 11.25-12.75 (285.8-323.9); wing 6.40 (162.6); tail 2.82 (71.6); bill 1.20 (30.5); tarsus 1.78 (45.2).

Recognition Marks.—Killdeer size or larger; bill somewhat shorter than head; finely streaked and mottled coloration, ochraceous and dusky. A bird of upland and prairie. Notes, a quavering alarm cry, and a mellow whistle long-drawn-out.

Nesting.—*Nest*: on the ground. *Eggs*: 4 or 5, creamy-buff or clay-colored, spotted with reddish- and yellowish-brown, chiefly about the larger end. Av. size, 1.80 x 1.28 (45.7 x 32.5). *Season*: c. June 1st; one brood.

General Range.—North America, mainly east of the Rocky Mountains, north to Nova Scotia and Alaska, breeding thruout most of its North American range; migrating in winter southward as far as Brazil and Peru. Occasional in Europe.

Range in Washington.—Casual? Possibly invading State from southeast.

Authorities.—Dawson, Auk, XXV, Oct. 1908, p. 484.

Specimens.—Prov. C.

THE Upland Plover is admitted to our lists solely on the ground of birds *heard* by me in western Walla Walla County on April 22nd and 23rd, 1905. That the birds were not also seen is not surprising, for, as Professor Lynds Jones says: "Our first intimation of his presence in spring is either the long-drawn whistle or the rolling call, from whence you know not. The first impulse is to glance quickly upward into the clear blue. Next you scan the horizon, the fields, the fences, all to no purpose. The cry seems to be all pervading—coming from everywhere. I never hear it but I involuntarily stop with a feeling akin to uncanniness. Where is the bird? Another call gives the direction, and you stand staring into the southern sky until in the distance, far

up, a quivering speck appears, approaches, passes onward, anon scattering broadcast the rolling whistle without an added tremor of the wings."

The bird is part Sandpiper, part Plover, to appearance, its short bill serving instantly to distinguish it from the Long-billed Curlew, which it resembles otherwise in choice of range and in general economy. It is very rare, possibly nothing more than accidental, west of the Rocky Mountains, but there are two records of its occurrence in British Columbia.

No. 275.

BUFF-BREASTED SANDPIPER.

A. O. U. No. 262. *Tryngites subruficollis* (Vieill.).

Description.—*Adult*: Upperparts dull grayish buff or grayish brown varied by blackish or olive-brown centers of feathers; underparts buff, dotted and streaked on sides of breast with blackish; the inner webs of the primaries, both webs of the secondaries, and the tips of the larger under wing-coverts speckled with black; axillars white; bill dusky; feet and legs greenish yellow. *Immature*: Like adult, but feathers of back, etc., rounded, distinctly bordered with whitish, the speckling of wing-quills and under coverts finer than in adults. Length 7.25-8.75 (184.2-222.3); wing 5.23 (132.8); tail 2.33 (59.2); bill .77 (19.6); tarsus 1.20 (30.5).

Recognition Marks.—Chewink size; general buffness of coloration; short, straight, blackish bill; black speckling on wing-quills and under coverts distinctive.

Nesting.—Does not breed in Washington. *Eggs*: 3 or 4, buffy grayish white, varying to pale olive, boldly spotted longitudinally (and somewhat spirally) with dark Vandyke or madder brown and purplish gray (Ridgw.). Av. size, 1.47 x 1.06 (37.3 x 26.9).

General Range.—North America, especially in the interior; breeds in the Yukon district and in the interior of British America northward to the Arctic Coast; South America in winter as far as Uruguay and Peru. Of frequent occurrence in Europe.

Range in Washington.—"Common at Shoalwater bay during the migrating season" (Cooper). No recent records.

Authorities.—*Tryngites rufescens* (Vieill.) Cab., **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 740. C&S.

Specimens.—Prov.

A SUSPICION—a shot—a record—and a mystery. These be the short and simple annals of several Sandpipers, not only for this State but others as well. Suspicions are permissible if not too frequently directed against birds we ought to know are common; the records are much quoted by scientific men; while the mysteries are being solved by the hardy explorers of the North—to

such a point, indeed, that we shall soon begin to feel Alexander's discontent,—that there are no more worlds to conquer.

However, of the Buff-breasted Sandpiper in Washington we know nothing save that Cooper guessed them to be common during migrations at Shoalwater Bay, where he took a specimen in 1854. Fannin considered it "not common" in British Columbia; while Brooks has taken it at Chilliwack, a little way into the interior.

The bird is somewhat like the Upland Plover (*Bartramia longicauda*) in habit and appearance, altho it is much smaller, and it frequents fields and prairies rather than mud flats. It is described as being usually of a gentle and confiding disposition; but during the breeding season, in the neighborhood of Point Barrow, or in the Anderson River region, the males are said to indulge some curious fancies. Solitary birds will walk about with one wing fully extended and held high in air, as a sort of perpetual challenge to fellow bucks. If two birds meet, they "spar" for a few minutes, or rise towering together to a height of thirty feet or more, or until discouraged by the sweep of the wind. At other times one will stretch himself up to full height, then, spreading his wings forward, puff out his throat and make a sort of chuckling noise, much admired by his companions.

No. 270.

SPOTTED SANDPIPER.

A. O. U. No. 263. *Actitis macularia* (Linn.).

Synonyms.—PEET-WEET. TIP-UP. TEETER-TAIL.

Description.—*Adult in summer:* Upperparts light olive-brown, with pale greenish or brassy luster; the head and neck streaked, and the back, scapulars, tertiaries, etc., irregularly barred with darker; quills darker and with more distinct greenish reflections; the inner primaries and secondaries narrowly tipped with white, the former varied with some white on the inner webs, the latter with much basal white, showing conspicuously in flight; central tail-feathers like back, but greener, the outer feathers becoming duller and tipped with white; a white superciliary line; entire underparts white and strikingly marked with rounded spots approaching color of back; bill flesh-color, sometimes orange, darkening above, or not, and with dusky tip; feet and legs pinkish white. *Winter plumage:* Similar, but back browner, unbarred. *Immature:* Like adult but unspotted below, tinged with gray on breast; above showing blackish or buffy bars, faintly on back, more strongly on wing-coverts, and upper tail-coverts. Length 7.00-8.00 (177.8-203.2); wing 4.15 (105.4); tail 2.00 (50.8); bill .93 (23.6); tarsus .95 (24.1).

Recognition Marks.—Sparrow to Chewink size; greenish brown back; boldly spotted underparts; the characteristic bird of river-bank and lake-shore.

Nesting.—*Nest:* on the ground, a slight depression, scantily or somewhat carefully lined with dead leaves and grass. *Eggs:* 4, creamy buff or dull white,

speckled and spotted with dark brown, chiefly about larger end. Av. size, 1.25 x .92 (31.8 x 23.4). Season: May 20-June 10; one brood.

General Range.—North and South America from Alaska to southern Brazil. Breeds thruout temperate North America, less commonly on the Pacific Coast. Occasional in Europe.

Range in Washington.—Not very common summer resident thruout the State; occurs sparingly on tide-water, more regularly along streams of the deeper mountain valleys; locally wanting east of the Mountains; casually resident in winter on Puget Sound.

Authorities.—*Tringoides macularius* (Linn.) Gray, **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 736. T. C&S. L¹. Rh. D². J. B. E.

Specimens.—U. of W. Prov. P. B. E.

LIKE a second Narcissus this familiar little Sandpiper loves to linger at the water's edge; and even if it be conceded that he has other business there besides looking in the mirror, we could not suppose that he is altogether insensible to the flattery of the smooth-flowing stream. It is for this reason, perhaps, that he prefers the vicinity of quiet inland waters; and it is this also—what else?—that tempts him to make from time to time little horizontal excursions, or loops, of flight out over the river or placid lake. If frightened, as by a boatman, the bird may patter along the muddy brim, or remove by short flights, but sooner or later he puts off from shore, edges out over the water, wheels about in a great circle, and draws near his starting point again in a graceful curve, which regards the shore as a sort of asymptote — this on wings held stiffly or quivering with emotion.

On shore the bird indulges a



Taken in Douglas County.

Photo by the Author.

NEST AND EGGS OF THE SPOTTED SANDPIPER.

never-ending habit of teetering: "The fore part of the body is lowered a little, the head drawn in, the legs slightly bent, while the hinder parts and tail are alternately hoisted with a peculiar jerk, and drawn down again with the regularity of clock work." This strange motion has won for the bird the name Tip-up and Teeter-tail, and gives it an air of mock solemnity which is only heightened by the Quaker drab adornment of the upperparts and the apparently serious view of life which the owner takes. Absurd as the action is in adults, it tests the risibles still more sorely when a toddling youngster, bristling with pin-feathers, discovers the same uncontrollable ambition in his rear parts, and says, How-do-you-do backward, with imperturbable gravity.

Arriving in its accustomed haunts about the middle of April, the Spotted Sandpiper immediately makes its presence known by notes which altho of trifling import, are particularly sweet and welcome. *Peet-weet*, or *weet, weet, weet, weet*, says the bird on all possible occasions, and a boat-ride on lake or river loses half its charm without the frequent interruption of this wayside greeting.

The Peet-weet's nest is usually a little removed from the water's edge, placed a few rods back among the stunted willows and rank grasses of the upper sand stratum of the beach, or else sunk somewhere upon a grass-grown bank. The birds are not always discreet in the matter of concealment, and will sometimes steal to the nest or visit it openly, while search is being conducted in the immediate neighborhood. The eggs, normally four in number, are immense for the size of the bird, and, as a consequence, the young are so well found at birth that they are able to scamper off with never a thought for the unusually substantial cushion of leaves and dried grasses which has harbored them in embryo.

No. 277.

LONG-BILLED CURLEW.

A. O. U. No. 264. *Numenius americanus* Bechstein.

Synonyms.—SICKLE-BILL. HEN CURLEW.

Description.—*Adult*: General color ochraceous-buff to pale cinnamon-rufous; upperparts varied with dusky, in broad streaks on crown, in narrow streaks on sides of head and neck, in heavy, central, "herring-bone," connected bars on back and tertials, and so variously mottled throut, only the outer webs of outer primaries being of solid color,—dusky; below, sharply streaked on breast and sides, sometimes sparingly barred with blackish, the ground color reaching its greatest purity and intensity on axillars; bill very long, considerably decurved toward tip; the culmen brownish dusky, the lower mandible yellow at base and

darkening toward tip; feet and legs stout, dark; claws short and broad. Length: 20.00-26.00 (508-660.4); wing 10.75 (273.1); tail 4.10 (104.1); bill up to 8.50 (215.9); av. about 6.50 (165.1); tarsus 3.15 (80).

Recognition Marks.—About Crow size,—making some allowance for bill; pale cinnamon coloration; long decurved bill distinctive; quavering cry.

Nesting.—*Nest*: a rather deep grass-lined depression on ground. *Eggs*: 4, ashy brown or clay-color, spotted and blotched with chocolate. Av. size, 2.58 x 1.82 (65.5 x 46.2). *Season*: April 20-May 10; one brood.

General Range.—Temperate North America, migrating south to Guatemala, Cuba and Jamaica. Breeds in the South Atlantic States and in the interior thru most of its North American range.

Range in Washington.—Not common summer resident and migrant east of the Cascades; casual, during migrations only, west of the Mountains. Formerly an abundant breeder on the East-side, especially between the Cascades and the Columbia River.

Migrations.—*Spring*: c. April 1st; Malott, April 6, 1896.

Authorities.—Cooper and Suckley, Rep. Pac. R. R. Surv. XII, pt. II, 1860, p. 245. T. I.² Rh. D¹, D². Kk. J.

Specimens.—(U. of W.) Prov. C.

THE Long-billed Curlew, or Sickle-bill, is a little the largest, as he is one of the best known birds of the order in Washington. Casual or rare west of the Cascade Mountains, this odd genius was formerly plentiful and well distributed thruout the open country of the interior. Being less dependent than most of his congeners upon the vicinity of water, he was to be found equally upon the upland prairies, the bunch-grass hills, or in the well-watered valleys,—in fact, wherever the sage was not so abundant as to deny a varied fare of land molluscs, beetles, caterpillars, grasshoppers, and fallen berries, such as the Curlew loves.

Arriving from the South about the first of April the birds move in large flocks, sometimes to the number of a hundred or more, in continually shifting lines and A-shaped figures—like the geese in that some experienced leader maintains a position at the front. Altho wary and difficult of approach, save at the nesting season, clumsy efforts at imitation of their quavering call will serve to bring the birds up eagerly. Once within range the Curlews are so overcome by solicitude for their fallen comrades that they are exposed to repeated attack until the hunter is satisfied. The "wagon-loads" reported from the Columbia Valley in an earlier day were, unfortunately, no exaggeration, and the ranchers today who occasionally see a Curlew may not realize how fearfully their ranks have been depleted.

Save in the fall of the year when the birds are fat, the flesh is tough and dry, and in many cases positively unpleasant. But if it tasted like twisted artemisia fibers, frail human nature could hardly endure to see so large a bird

and such an "easy" mark flourish unmolested. Kill it, by all means, and thus fulfil the destiny of budding manhood! The best opportunity is afforded when the bird alights and pauses for a moment with uplifted wings, a yacht of the desert come to anchor at the ancestral roadstead.

During the nesting season, the Sickie-bill throws caution to the winds, and hurries forward to meet a prospective intruder with protesting shrieks. If the newcomer be really curious as to the whereabouts of the nest, both birds will circle and flap and hover and vociferate until one might think that Bedlam had broken loose. The extraordinary bill of this bird, sometimes eight or even nine inches in length, serves admirably as a pair of chop-sticks, and will pick up a weevil as deftly as a Chinese a grain of rice; but as a vehicle of emotion the vibrating mandibles are deliciously absurd. *Ker-cr-cr-cr-uk, ker-cr-cr-cr-uk* comes torrentially and unceasingly from the anxious throats until one feels forced to join in the excitement, hysterically. Shoo! you yawping termigants you!

The nest is a mere grass-lined depression in the ground of pasture or hill-side, and may or may not have convenient access to brook or lake or swamp. The eggs, normally four in number, may be found by the 20th or even the 15th of April. They are the size of large hens' eggs, pale buffy-brown or clay-colored, variously spotted and blotched with a rich dark brown, and sometimes exhibiting traces of violet outcropping from the deeper strata of the shell. Only one brood is raised in a season.

It is high time to retire this quaint and interesting fellow from the list of "game birds" and to afford him absolute protection. The struggle for existence will be hard enough for him under the conditions imposed by civilization, without our compassing his absolute destruction merely that a few more light-hearted pots may boil. Curlews are still common in certain spots where they have been wont to assemble for migrations, but their total numbers have certainly been reduced to less than one-quarter, probably nearer one-eighth, of their former proportions.

No. 278.

HUDSONIAN CURLEW.

A. O. U. No. 265. **Numenius hudsonicus** Lath.

Synonym.—JACK CURLEW.

Description.—*Adult*: Prevailing color pale buffy; crown with two broad dusky stripes parted by buffy; a dusky line thru eye; throat whitish, immaculate; sides of head, neck all around, and fore-breast finely streaked with dusky; the streaks, widening into bars on sides and flanks; back, etc., dusky, varied with buffy

and ochraceous-buff; tone lightening on wings, due to preponderance of latter color; tail distinctly barred, ochraceous-gray and dusky; quills less distinctly barred with same tints, except on outer webs of outer primaries, which are plain dusky; axillars and lining of wing clear ochraceous-buff, heavily barred with fuscous; bill decurved, blackish above, lightening at base of mandible; feet and legs black. Length 16.50-18.00 (419.1-457.2); wing 9.75 (247.6); tail 3.50 (88.9); bill 3.50 (88.9); tarsus 2.28 (57.9).

Recognition Marks.—Small Crow size; mottled and streaked, dusky and pale buff; rather stout decurved bill of moderate length; broad, blackish crown-stripes.

Nesting.—Does not breed in Washington. *Eggs:* 3-4, pale olive, spotted with dull brown. Av. size, 2.27 x 1.57 (57.7 x 38.9).

General Range.—All of North and South America, including the West Indies; breeds in the high north, and winters chiefly south of the United States.

Range in Washington.—Fairly common during migrations, chiefly coast-wise.

Migrations.—*Spring:* Hoquiam, April 19, 1891 (Lawrence); Tacoma, Apr. 26, 1897. *Fall:* Destruction Island, July 15, 1906; Ozette, July 25, 1906.

Authorities.—Lawrence, Auk, Vol. IX. Jan. 1892, p. 43. L¹. Rh. Kb. B. E.

Specimens.—(U. of W.) Prov. B.

"JACK" CURLEWS begin to appear upon our mud flats and in the vicinity of salt water marshes about the middle of April, and by the first of May have become common in suitable localities. They are, perhaps, not so wary as their long-billed cousins, of which they are lesser and unexaggerated models. They move in flocks varying in number from four or five to several hundred; and in manner of flight they appear not unlike gulls, at a little distance.

When feeding, the birds move about nimbly, and their enthusiasm sometimes provokes the mirth of the beholder. If on the mud flats, the Curlew plunges its bill like a probe into the mud, and jabs excitedly when it encounters some reluctant crab or worm. Upon the tide-washed rocks, also, the bird is very agile; and few of the many-legged, scuttling creatures succeed in evading it. A Curlew, reaching for a salty tidbit with partially opened mandibles, reminds one absurdly of a bespectacled entomologist with his tweezers. Berries constitute a chief article of diet for these birds in the uplands of Alaska, and they not only become exceedingly fat, but their breasts are empurpled with the juices.

If the birds' suspicions are aroused by the stealthy approach of the hunter, they cease feeding and stand motionless for a time, awaiting the issue of the man's intent. When frightened, they take to wing with loud cries; but if one or more of their number are stopped by the hurtling shot, the rest remain for some moments to indulge that fatal sympathy which is so characteristic of the lesser shore birds.

Nesting is carried on in June and July, in the dim interior of Alaska, and along the northern borders of the continent. The greater number pass upon

the return in September, but I have seen a few, possibly non-breeding birds, as early as July 15th; while by August 1st they are not uncommon along the western coast. Their haste is not unseemly; but they do not let the kelp grow beneath their feet, for they are due to winter in far Patagonia.

No. 279.

AMERICAN AVOCET.

A. O. U. No. 225. **Recurvirostra americana** Gmel.

Description.—*Adult in summer:* Head and neck all around and breast light cinnamon rufous; eyering white; region about base of bill whitish; wing-quills and coverts (except inner secondaries and tips of greater coverts) deep brownish black; back, inner scapulars, and inner quills, lighter brownish black; remaining plumage, including outer scapulars, rump, tail, etc., white;—tail tinged with ashy; bill long, slightly recurved toward tip, black; legs dull blue. *Adult in winter:* Similar but without cinnamon-rufous,—white instead; tinged with pale bluish ash, especially on the top of head and hind-neck. *Immature:* Like winter adult, but hind neck touched with rufous; scapulars, etc., buffy-tipped, or mottled; wing-quills tipped with whitish. Length 16.00-19.00 (406.4-482.6); wing 8.82 (224); tail 3.90 (99.1); bill 3.72 (94.5); tarsus 3.66 (93).

Recognition Marks.—Crow size; long legs; black and white and cinnamon-rufous in masses; long, slightly or strongly upturned bill.

Nesting.—*Nest:* a slight platform of weathered reeds or plant-stems on damp ground in or near a swamp. *Eggs:* 3-5, usually 4, pale olive or olive-buff, heavily and rather uniformly spotted with chocolate-brown and black. Av. size, 1.95 x 1.35 (49.5 x 34.3). *Season:* May 10-20; one brood.

General Range.—Temperate North America north to the Saskatchewan and Great Slave Lake; in winter south to Guatemala and the West Indies. Rare in the eastern United States.

Range in Washington.—Summer resident in lake region of eastern Washington; elsewhere rare or casual during migrations.

Authorities.—Cooper and Suckley, Rep. Pac. R. R. Surv., Vol. XII., 1866, p. 234. T.

Specimens.—P^r. C.

NATURE never made anything altogether awkward. Even stilts and chop-sticks are graceful when fashioned in the great workshop. The chop-sticks, in this case, are delicately curved and skillfully handled; while the stilts support their owner most jauntily at a height of seven or eight inches above the ground. These unique implements belong to a soft-plumaged, dove-eyed creature, which the pioneers knew well but which is now almost extinct within our borders, the American Avocet.

The waters of a certain lake in eastern Washington, being relieved in 1904 by a new outlet, fell eight feet in a few days, leaving a shallow cove with its ancient bottom of ooze exposed here and there in the form of low mud reefs. There are mazes of cat-tails and bulrushes on one side and low alkaline slopes, acres in extent, upon the other. These conditions, it seems, exactly meet the requirements of these strange birds, and here we found them to the number of a score in May, 1906.

Of course the Avocets were not alone upon this favored spot. Yellow-headed Blackbirds gurgled and screeched in the reeds, and Marsh Wrens sputtered and chuckled over their quaint basketry, while mud-hens and ducks of a dozen species, but chiefly Redheads and Ruddies, paddled in the channels or brooded in the teeming brakes. Once during our stay a regatta of Whistling Swans condescended at early dawn, but they were soon off, upon what high mission we could only guess. There was, indeed, a constantly shifting panorama of life, but the only creatures which cared to dispute with the Avocets the possession of the tiny mud islands were the turtles and a lazy band of lumbering White Pelicans. One S-shaped reef, in particular, seemed to be the favorite lounging place of the Pelicans, and twenty-five of their comfortable fat bodies appeared to about exhaust the accommodations; yet a pair of Avocets managed to live thru the daily inundation and to maintain a nest with four eggs. Forster Terns, also, occasionally bent an inquiring eye upon the reefs in passing, but we knew they would not raise proprietary questions till June.

The Avocets are not rigidly gregarious; they associate freely, however, upon the nesting ground, and are to be seen in small scattered groups as often as singly. Since the tones of the surroundings are chiefly wrought out in gray-greens, grass-greens, and pale blues, the birds have no recourse to the arts of protective coloration, but appear boldly in a garb of black and white, softened on head and neck by cinnamon brown, and this habit serves to keep



Photo by the Author.

A-WING.

them ever before the eye, the observed of all observers. If I were to make for them a claim of uniform gracefulness, some might dispute me on the ground of photographs herewith submitted; but it must be remarked that the eye catches only the restful nodes of motion, while the unfeeling camera sometimes surprises the subject when he is only getting ready to be graceful.

These birds are not only waders, but swimmers and flyers as well, and they show little preference among these modes of activity. If you approach a little too closely a wading Avocet, he may walk off with dignified carelessness;



Taken in Douglas County.

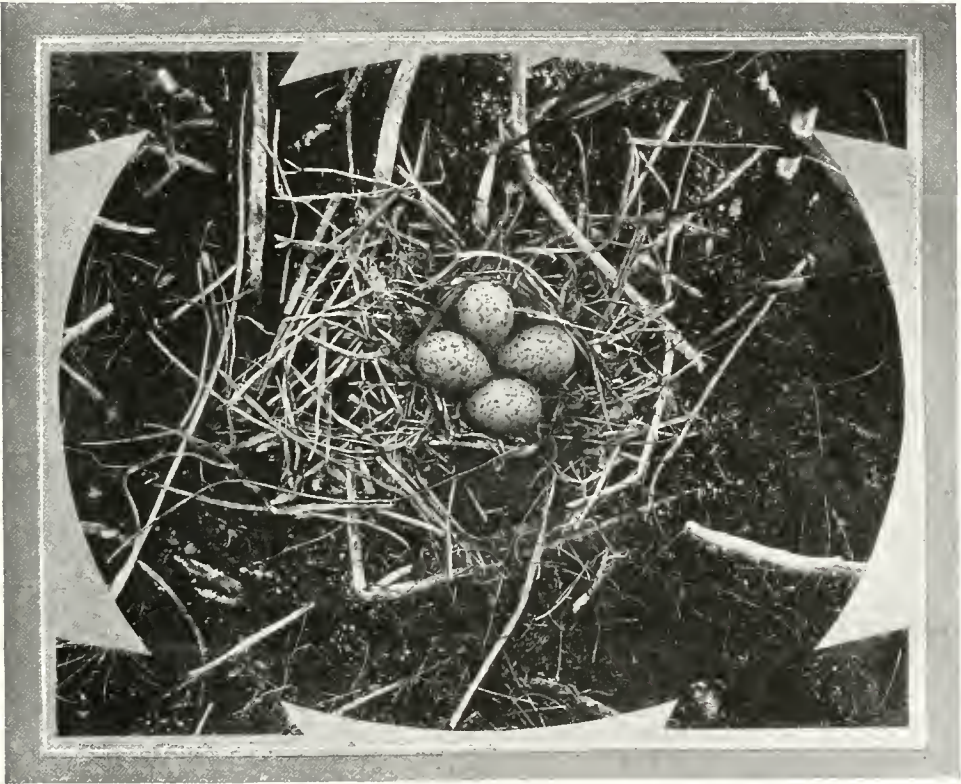
Photo by the Author.

AVOCETS TAKING TO WING.

and if the retreating bottom takes him beyond his depth, he is instantly at ease upon the water and swims off, duck-fashion, with keel held low in front, now glancing at you over one shoulder and now over the other. Or else, either from land or water, he takes quickly to wing, letting the long legs first dangle and then straighten out behind him as he progresses. Rising is thus a bit awkward, and in settling, also, the legs must first be brought forward to engage the surface of reef or pool before the wing motion ceases. In flight the motion may be either fairly rapid or quite leisurely, according to whether the bird is frightened or merely curious; while at sailing he is a passed master,

the neck and bill being outstretched to fullest capacity, to offset the long rudder of the legs.

How exactly fitted these handsome creatures are to their somewhat unique environment, may not be fully realized until one attempts to wade thru their oozy haunts. The bottom here is very treacherous, with frequent concealed pitfalls and subaqueous passages. Both Mr. Bowles and myself shipped water in our hip boots repeatedly, in spite of the greatest precaution; and once I went



Taken in Douglas County.

Photo by the Author.

NEST AND EGGS OF THE AMERICAN AVOCET.

into a hole so neatly, with both feet, that I had a momentary vision of total disappearance, and shouted in terror. Fortunately, however, the sides held when my outstretched hands met them. But the bird is prepared to meet any inequality of bottom, since it does not fear submergence, and the legs are carried at a slight angle, that is, divergent, to preserve the equilibrium and guard against sudden surprise.

In feeding along the water's edge, or at moderate depths, the Avocet

does not dabble at random, but sees and snatches its prey from the surface of the water with great agility, assisting the passage of the morsel down the long bill by a quick forward thrust of the head. In advancing, the legs are withdrawn rapidly along the line of the tarsus, with folded or collapsed foot, and thrust forward again in such fashion as least to disturb the ooze of the bottom.

As is not, perhaps, so generally known, the Avocet is also a ready diver, or, more accurately, dabbler, since it feeds from the surface of the water with the tipping motion characteristic of some of the ducks. In this operation, the legs are not at all exposed, but only the tail and the rump, the legs being evidently required under water to maintain the vertical position. In dabbling, the birds must depend more or less upon the sensitiveness of the bill, for the water becomes too much disturbed for vision. The confidence in strangers sometimes exhibited by these birds in carrying on their diving operations is very flattering; and one only wishes that it had been uniformly deserved during the years which have so sadly reduced their numbers.

Avocets are rather noisy when disturbed or threatened, but are not especially so at other times. Their notes consist chiefly of simple shrill cries, neither very musical nor yet strident, "*crick-crick-crick-crick*" or *creek-creek*—something, in fact, after the order of the Curlews, with many excited quaverings beside.

It is, however, when its nest is threatened that the bird displays its utmost charms. It is anxious at the outset to distract attention, even before discovery of the eggs is certain; and as one pokes about in a flat-bottomed boat or canoe, a half dozen of them at once may be seen hoisting signals of distress, and inviting pursuit. One example may suffice. With splendid light and well equipped for photographic appreciation, we put the canoe against a tiny reef upon which we saw a nest with three eggs. The mother bird had flushed at a hundred yards, but seeing our position she flew toward us and dropped into the water some fifty feet away. Here she lifted a black wing in simulation of maimed stiffness, and flopped and floundered away with the aid of the other one. Seeing that the ruse failed, she ventured nearer and repeated the experiment, lifting now one wing and now both in token of utter helplessness. After a while the male joined her, and we had the painful spectacle of a crippled family, whose members were uttering most doleful cries of distress, necessitated apparently by their numerous aches and breaks.

Once, for experiment's sake, we followed, and the waders flopped along in manifest delight coaxing us up on shore and making off thru the sage-brush with broken legs and useless wings. But we came back, finding it better to let the birds make the advances. Mr. Bowles hit upon the scheme of splashing gently in the water, and it served admirably to excite the birds and make them reckless; and the click, click of the camera was sweeter music in our ears than the explosion of death-dealing cartridges before a band of elk.

The birds were driven to the very limit of frenzy, dancing, wing-trailing, swaying, going thru last convulsions and beginning over again without regard to logical sequence, all in an agony of effort to divert attention from those precious eggs. It may seem cruel to have harassed them so, but we were sustained by the integrity of our purpose, which was not robbery, but snapshottery; and we neglected no opportunity to work upon their feelings. Neighbors came up and looked on sympathetically, or joined in the clamor.

As time elapsed, however, the color of the play changed. Finding that the appeal to cupidity was of no avail, the birds appeared to fall back upon the



Photo by the Author.

HOISTING THE SIGNAL OF DISTRESS.

appeal to pity. Decoying was useless, that was plain; so they stood with up-raised wings, quivering and moaning, in tenderest supplication. It was too much even for conscious rectitude, and we withdrew abashed.

Chancing to exhibit my photographs to some friends in a Seattle store, a stranger asked permission to see them. "Why," he exclaimed, "those are the very birds I saw over at ——— Lake a few weeks ago. Curlews, ar'n't they?" "No," I said, "something like them, but a deal handsomer; Avocets." "Beautiful! Beautiful!" Then with a sigh, "Ar'n't many left, I guess; a fellow killed twelve of them the day I was there."

I swallowed hard. Our Avocets! probably the last surviving colony in the State, butchered to a bird, no doubt. And for what? Say, Mr. Rancher, (I got the particulars) when you get tired of beef and mutton—and I happen to know that both are plentiful in your neighborhood—draw on me for the price of a dozen Peacocks (their tongues are said to be good eating, I believe) but please spare these beautiful, confiding Avocets—that is, if you ever see any more of them^a.

No. 280.

SURF BIRD.

A. O. U. No. 282. *Aphriza virgata* (Gmel.).

Description.—*Adults in summer:* Above chiefly black, edged and streaked with white, in finest pattern on head and neck; spotted with chestnut on lower scapulars and tertials; wings grayish dusky with outcropping of white on tips of secondaries and (extensively) on base of primaries, upper tail-coverts and basal portion of tail white; remainder of tail black tipped narrowly with white; below white streaked and spotted with dusky, finely and narrowly on chin and throat, broadly and heavily on breast, sparingly but sharply and broadly on flanks and under tail-coverts; axillaries white; bill black, flesh-colored at base of lower mandible; feet and legs greenish yellow. *In winter:* Pattern of plumage blended, nearly uniform grayish dusky on crown, back, hind-neck, and breast, on sides streaks coalescing or wanting, but some whitish edging on feathers of wing-coverts, rump, and breast. Length: 9.00-10.00 (228.6-254); wing 6.50-7.00 (165.1-177.8); tail 2.75 (69.9); bill 1.00 (25.4); tarsus 1.25 (31.8).

Recognition Marks.—Robin size. General streakiness with short bill, white rump and white wing-patch distinctive, as compared with *Heteractitis incanus*; larger size and less heavy coloration, as compared with *Arenaria melanoccephala*. Inhabits rocks and lives close to water's edge, so not likely to be confused with species other than those named.

Nest and eggs unknown.

General Range.—Coasts and islands of western America from Bering Strait south to Chili.

Range in Washington.—Rare migrant.

Authorities.—? *A. torensendi*, Audubon, Orn. Biog. V., 1839, p. 249, Pl. 428. *Not previously published.* Specimens by Dr. A. K. Fisher, Blakely Rocks, Aug. 30, 1897.

Specimens.—(U. of W.) Prov.

a. This account of the Avocet, contributed by the author to the columns of The Pacific Monthly, and appearing in June, 1907, is reproduced here by courtesy of The Pacific Monthly Publishing Company.

THIS is undoubtedly the *rara avis* of Western littoral ornithology. It is credited with a range extending from Bering's Strait to Chili; hence, it probably breeds in the Northern Hemisphere, and winters south. In habit, it appears to resemble the Black Turnstone, save that it is more solitary. It bears a superficial resemblance also to the Wandering Tattler, and is likely to be found in the same situations. Our Washington record was made by Dr. A. K. Fisher, who took a specimen from the Blakely Rocks opposite Seattle.

No. 281.

RUDDY TURNSTONE.

A. O. U. No. 283.1. *Arenaria interpres morinella* (Linn.).

Synonyms.—CALICO-BACK. CALICO-BIRD. BRANT SNIPE. BRANT-BIRD. CHECKERED SNIPE. STONE SNIPE. HORSEFOOT SNIPE.

Description.—*Adult in summer:* Back, scapulars, etc., variegated black and chestnut-rufous, with a little white edging; the black pure on sides of neck or "shoulders," and continuous with that of chest; rufous predominating on wings; upper lores, cheeks, sides of throat, foreneck and sides of breast glossy black; throat and lower lores pure white, and the remaining portions of head and neck impure white, the crown heavily or lightly streaked with black; rump, basal portion of tail, with lateral and longer upper coverts, the greater wing-coverts (principally), and the remaining underparts, entirely white; basal portion of upper tail-coverts, and subterminal portion of tail, black, the latter tipped narrowly with white and rufous; more or less concealed white on primaries;—altogether a piece of patch-work in three colors. Bill short, stout, sharpened, but not acute, slightly upturned, black; feet and legs yellow, blackening at the joints. *Winter plumage:* Without rufous; the black mostly replaced by brown, and the rufous by gray; black of breast much restricted. *Immature:* Similar to adult in winter, but with some ochraceous margining above; head chiefly dusky, the fore-neck clouded with dusky. Length 9.00-10.00 (228.6-254); wing 5.75 (146.1); tail 2.30 (58.4); bill .90 (22.9); tarsus 1.00 (25.4).

Recognition Marks.—Robin size; patch-work in rufous, black, and white above; black and white below; beach-haunting habits.

Nesting.—Does not breed in Washington. *Nest:* on the ground. *Eggs:* 3 to 4, clay-colored, blotched and scrawled with grayish brown. Av. size, 1.59 x 1.13 (40.4 x 28.7).

General Range.—Arctic America breeding chiefly east of the Mackenzie River, south in migrations chiefly coastwise, to the Straits of Magellan; not uncommon in the interior and probably of regular occurrence tho not common on the Pacific Coast.

Range in Washington.—Not common spring and early fall migrant west of the mountains. (Blaine, Sept. 1, 1904; Destruction Island, July 17, 1906.)

Authorities.—*Streptilas interpres* (Linn.) Ill., **Baird**, Rep. Pac. R. R. Surv., Vol. IX., 1858, p. 702. C&S. Rh.

Specimens.—Prov.

WE reserve the right to feel aggrieved that this beautiful creature will not stay and make his home with us. We have done our best to "advertise the country." We have even tried to induce our fellow-men with the guns to discriminate between the real game, i. e., birds with bodies big enough to be really worth eating, and animated bunches of feathers, like these, worth infinitely more as food for the eye. But the Turnstone tarries not in our inhospitable clime. And it is well, perhaps, for he is ever a sociable creature; and where two or three shore birds are gathered together, there shall the gunner be to plot and destroy.

And we are thankful that the Turnstone's beauty graces our shores if but for a season. Indeed, this handsome wader is a bird of catholic taste, and may appear during migrations under widely varying conditions. Sand beaches have first choice, and to see the pied pipers pattering after the retreating wave, or else submitting to its playful buffeting, is indeed a pretty sight. Here also the birds scratch after the manner of chickens, earning thereby the name Chicken Plover. Or if they tire of the sand, they patter among the pebbles, upsetting industriously those which are likely to harbor hidden sweets of bug or worm.

Rough, tide-washed rocks come in for second choice; and altho the birds cannot do any stone-turning here, they take ample toll of the clinging creatures, limpets and their ilk, which require a poke and a pry to convince them. They mingle here with their cousins, the Black Turnstones, and altho I have seen a large company of the latter receive a brighter pair with some show of haughtiness, I think they soon establish their welcome.

But a river bar or an alkaline splash, in the interior of the State, is as likely to win an hour from this bird in passing; and I have seen stray individuals, installed as guides, riding the pile booms of Drayton Harbor in company with half a thousand little "Westerns."

Once, in Ohio, I was surprised and delighted, in view of the late date, June 4th, 1903, to see a flock of sixteen of these waders feeding industriously on a large patch of reclaimed swamp land near Port Clinton. By cautious approach under cover of a dyke I was able to see that both sexes were about equally represented in the flock; and noted, again, the patchy pattern of white, black, and intense rufous, as it was thrown into relief by the black, mucky soil. The birds were silent and intent only upon feeding. This they did by advancing slowly over the plowed ground and gleaning from its surface, and by turning over the clods which lay in their path to search eagerly beneath. It was rather amusing to see a bird walk up to a clod bigger than itself and

several times as heavy, insert its beak and give an odd little hunt and upward jerk which would send the clod rolling a foot or more. Sometimes a lump, more firmly imbedded, offered resistance, in which case the bird would make another honest effort, or pass on unconcerned.

In flight the Turnstones bunch closely at first, but afterward scatter a little more widely, and wheel and turn after the manner of Killdeers in autumn. The chief impression is of flashing white, as they quarter before the sun, or as they settle again in some distant portion of the field with wings daintily uplifted.

The nesting season, spent in Alaska and the high North, is astonishingly brief. The tardy ones are not all cleared by the first of June, and I have encountered the vanguard of the return as early as July 17th, upon Destruction Island.

No. 282.

BLACK TURNSTONE.

A. O. U. No. 284. *Arenaria melanocephala* (Vig.).

Synonym.—BLACK-HEADED TURNSTONE.

Description.—*Adult in summer:* Color pattern of plumage somewhat as in preceding, but without chestnut; whole head, neck, upper back, and breast brownish black, varied by sooty centers of feathers, glossed with greenish on crown and back, shading by white tips of feathers on breast into white of underparts; a white loreal spot and some speckling of white on forehead; lower back, rump, and upper tail-coverts white, the last-named with included central patch of black; wings and tail as in *A. morinella*. *Adults in winter:* Similar, but head, chest, and neck uniform sooty black. *Immature:* Like adult in winter, but head grayer and back with buffy edgings. Length of adult about 9.00 (228.6); wing 6.00 (152.4); bill .85-1.00 (21.6-25.4); tarsus 1.08 (27.4).

Recognition Marks.—Chewink to Robin size; absence of rufous, and foreparts chiefly black, distinctive in summer; but requires careful discrimination from Surf Bird (*Aphriza virgata*) whose foreparts are chiefly dusky in winter plumage.

Nesting.—Not known to breed in Washington. *Nest* and *Eggs* much as in *A. morinella*.

General Range.—Breeding along Pacific and Arctic Coast of North America from British Columbia to Point Barrow; south in winter to Lower California.

Range in Washington.—Abundant spring and late summer migrant along the West Coast; less frequent on coast and islands of Puget Sound; perhaps sparingly resident in winter.

Authorities.—*Strepsilas melanocephalus*, Vigors., **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 702. "Fort Steilacoom, Cal." [W. T.]. C&S. L². E.

Specimens.—(U. of W.) Prov. C. E.

SAVE during the nesting season, the Black Turnstone is as characteristic of the barnacle-covered reefs off our Pacific shore as is the Black Oyster-catcher in June. The birds move in little companies, cheered by rattling, piping cries; and they seem to prefer the lowest possible reaches of the rock above the actual wash-line of the waves, where they may be wetted by incessant spray. When hushed into silence and immobility by the approach of a stranger, the birds appear themselves like little else than bunches of sea-weed or knobs of the somber reef; but when reassured as to the stranger's intent, they begin to stir about and chatter. Now and then one of them runs at his fellows with outstretched bill and neck, and a fine scuffle of flight ensues. When they take to wing, as they do by a common flock impulse, the transformation in appearance is a delight to the eye. Instead of a row of dull-colored clods, there appears a constant cyclorama of flashing whites, set off by variegating blacks.

In summer this species enjoys a rather more southerly distribution than *morinella*, being found as far south as Sitka. According to Nelson: "It breeds among the brackish pools on Saint Michaels Island, and is found scattered over the wet flats everywhere. It is one of the commonest birds of this locality, its sharp clear note breaking the silence wherever one turns his steps among the pools and marshy places. It has a habit of circling round the intruder, during the nesting season, with a fine clear peeping cry like the syllables *weet, weet, too-weet*, as it moves restlessly about; now stopping a moment on a slight knoll, then running hastily along the edge of a neighboring pool, perhaps picking up a scrap of food as it runs, and then it mounts on wing again and comes careering about, evincing the liveliest distress at the invasion of its haunts."

The Black Turnstone is at no time so great a wanderer as its ruddy cousin. It does not frequent the interior, nor does it go further south than Lower California. Its range on Puget Sound is chiefly limited to the islands and rocky points north of Port Townsend, altho Suckley mentions its occurrence "in immense numbers," "on a small rock island nearly opposite Seattle," probably Blakely Rock. He also found that they wintered sparingly along the Straits of Juan de Fuca, where he shot them in January, February and March.

No. 283.

BLACK OYSTER-CATCHER.

A. O. U. No. 287. *Hæmatopus bachmani* Aud.

Synonym.—PLUMPER.

Description.—*Adult*: Head and neck slaty black; remaining plumage sooty black, lightest (dark sooty brown) on back; bill and eyelids vermillion; irides yellow; feet and legs pale old-rose or flesh-color; nails black. *Immature*: Sooty



THE BLACK OYSTER-CATCHER.

black varied by rusty edgings of feathers; bill shorter, pointed, dusky. *Downy young*: Ashy gray, striped above with black. Length of adult about 17.50 (44.5); wing 10.00 (25.4); tail 4.50 (11.4.3); bill 3.00 (7.6.2); tarsus 2.25 (5.7.2).

Recognition Marks.—Crow size; uniform black plumage; vermilion beak.

Nesting.—*Nest*: a pint of rock-flakes placed on rock or reef just above the tide-line. *Eggs*: 2 or 3, olive-buff of varying shade, spotted boldly, but often sparingly, with black and dark brown, with some imbedded markings of the same. Av. size, 2.20 x 1.53 (55.9 x 38.9). *Season*: c. June 1st; one brood.

General Range.—Pacific Coast of North America from Lower California north to the Aleutians; the Kurile Islands; breeding thruout most of its range.

Range in Washington.—Common resident upon the Olympiades and the adjacent coast; sparingly resident on the smaller islands of the San Juan group.

Authorities.—? Audubon, Birds of America, Vol IV. pl. 427. **Townsend**, Narrative, (1839) p. 348. T. C&S. R.H. E.

Specimens.—(U. of W.) Prov. C. E.

PROSY hedgerows and quiet duck-ponds for such as like them; but roaring reefs and a pounding sea for the Black Oyster-catcher! And what more romantic spot to charm the eye and fire the imagination, than a bird rock in the blue Pacific! The fog, it may be, shrouded the entire scene at daybreak, but as we launch out from the surf at nine o'clock, it is clearing away, and only stray



Scene in The Giants' Graveyard.

Photo by the Author.

"ROARING REEFS AND A POUNDING SEA."

wisps of mist cling about the battlements of the promised isle, a league offshore. As we approach, uneasy gulls and inquiring puffins pass near us overhead, the former drifting up as tho casually, but quavering suspiciously; the latter including us upon the rim of great circles several times repeated, and checking their flight each time sufficiently to survey us with grave and

careful curiosity. The Cormorants begin to shift uneasily upon their nests, while disengaged members of their company join the increasing ranks of scouts. Marauders are not so little known that the approach of mysterious strangers can be regarded calmly.

But the official greeting of the motley host is extended by the Black Oyster-catcher, the self-constituted guardian of all sea-girt rocks. He has had his eye upon us from the moment of launching, and when we are within a hundred yards, mindful of his brooding mate or the secreted babies, he flies straight out to meet us and quavers a boisterous welcome, a welcome wherein anxiety is veiled by effusiveness. His effusiveness, moreover, is not unmingled with sarcasm, as who should say, "Good morning, gentlemen, good morning. Ah, you are officers of the law, I perceive, and armed with a search warrant. Quite proper, quite proper! Help yourselves, gentlemen. If I can be of any assistance to your worthy cause, command me."

And so the garrulous old marshal goes back shouting and chuckling. Once out of sight behind the rock, he repeats hurried instructions to his children to remain hidden in their crevices; then, ever mindful of appearances, he hurries forward again, beaming with virtuous importance, and vociferating shrilly, "No, gentlemen, there is nothing the matter. I have been clear around the island and there isn't a thief in sight. But help yourselves, gentlemen. Oh, yes, help yourselves. Doubtless *you* are experts."

Anon, birdlums! We are very much occupied just now with the problem of landing. Our island is nearly surrounded by rocky shoulders which are covered only at highest tide, and upon one of these, on the lee side, we hope to disembark. Albeit there is little breeze, there is a heavy swell running, and the Indians scull cautiously as we draw near. Just as we prepare to leap ashore with the cameras we are swiftly upborne by a quartering sea. "Wass!" (don't do it) the sternsman cries sharply, and we crouch in terror as the canoe seems about to be dashed in pieces upon the flooded reef. But the boat just clears in the recoil and we go down, down, while a swift pageant of mussels, barnacles, sea-urchins, and bright-hued anemones shoots past us, sputtering and choking at the sudden exposure to air. When we do effect a landing, we must scuttle for safety before the next wave reaches, with a dull chug of satisfaction, our recent landing-place.

The lower levels of the bird-rock are sacred to the Oyster-catchers, and these engage our attention at once. Very diverting creatures they are at any time, but never more so than at close quarters. As large as domestic fowls, with sooty black plumage, they are provided with stout feet and legs of a pale flesh color, and a strong chisel-shaped bill of a bright vermilion hue. The yellow eyes are surrounded by rings of carmine, which impart a droll appearance to these wags in feathers; and in the midst of most earnest floods of bombast, they cannot forbear tipping you sly winks, like auctioneers.

Now and then one will alight quite near and stand for a moment looking very big and bold. Then he will draw his head in and settle his body lower on the legs and sneak off, glancing furtively over his shoulder to see if his movements are being shadowed. Without question he is trying to develop the kind and degree of our interest. If the female was sitting upon eggs she slipped away too soon to be caught at home, and she spends the entire time of



Taken on Carroll Islet.

Photo by the Author.

A NESTING SITE OF THE BLACK OYSTER-CATCHER.

A GRASS-LINED NEST WITH THREE EGGS MAY BE DISCERNED JUST TO THE LEFT OF THE BLACK CENTER.

our stay arranging elaborate pantomimes for our misguidance. Now she bends with quivering wing and dips her head up and down, as tho inviting attention to her charming nestlings. "Ar'n't they darlings?" (She means a heap of mussel shells just before her eye). Or again she settles down upon a barnacle-covered rock and broods virtuously—on barnacles.

And if by any accident one does become possessed of the real secret, it is great sport to devise a stealthy return and to watch the bird steal away from the eggs, slowly, painfully, in abject humiliation, hoping against hope that she is eluding observation, until a safe distance is reached. When the game is "all



Taken on Bare Island, B. C., and on Destruction Island.

Photos by Walter I. Burton and the Author.

HARD BEDS.

off" the birds cause the rocks to resound with their strident cries, and if there are neighbors, these join forces with the immediately besieged ones until our ears ache.

Left to themselves, the birds are no Quakers, and the antics of courtship are both noisy and amusing. A certain duet, especially, consists of a series of awkward bowings and bendings in which the neck is stretched to the utmost and arched over stiffly into a pose as grotesque as one of Cruikshank's drawings,—the whole to an accompaniment of amorous clucks and wails.

The eggs of the Black Oyster-catcher, normally three in number, are oftenest placed in the hollow of a bare rock, lined with a pint or so of rock-flakes, laboriously gathered. Occasionally bits of shell, especially the calcareous plates of the goose barnacle, are added by way of adornment. Now and then the wader emulates the gull and prepares a careful lining of grasses. One such nest with three eggs I passed rejectedly, on Carroll, languidly supposing it to be a gull's until Professor Jones exclaimed over it.

For a nesting site the upper reaches of barren reefs or shoulders are chosen, but on the smaller rocks, where the waders have exclusive rights, the



From a Photograph, Copyright, 1908, by W. L. Dawson.

A HARD CRADLE.

NEST OF BLACK OYSTER-CATCHER ON DESTRUCTION ISLAND.

eggs may be lodged on the very crest of the islet. Again, upon Destruction Island, we found eggs on a coarse beach gravel, where to the protection of color, stone-gray with black spots and blotches, was added the almost perfect assimilation of form to that of the rounded pebbles.

Owing to the exposed situations chosen, as well as to the uncompromising prominence of the bird, the eggs of this Oyster-catcher are favorite provender for the Raven (*Corvus corax principalis*). From this cause alone I should judge that not over half the eggs laid upon the Olympiades ever hatch.

A young Oyster-catcher is a master at freezing, and his case is helped somewhat by rusty feather-edgings, which enable him to blend with the surroundings. When warned, he flattens to the rock with outstretched neck and bill, and nothing but the parental permission or the hand of the discoverer will absolve him from his fakir vow. That the appearance of the fledgling is not devoid of interest is testified by L. M. Turner, who says in his "Contributions to the Natural History of Alaska": "I once procured a less than half-grown bird of this species, and if any one would like to have one it can be gotten up in the following manner: Take the hinder half of a black kitten, dip about four inches of its tail in red paint, then fasten to the legs a piece of tallow candle about four inches



Taken on the Grenville Arch.

Photo by the Author.

YOUNG OYSTER-CATCHER HIDING.

long, jab the wick end of the candle down hard on the floor to spread it out for feet. Stand it up and heave a boot-jack at it to give the desired animation, and a good representation of a young Black Oyster-catcher will be produced, for a more comical object than a toddling Oyster-catcher is difficult to conceive."

The name Oyster-catcher is, of course, a misnomer. Oysters are not much given to sprinting anyway, and this bird is not at all interested in their ambulatorial powers; for he does not frequent sand-beaches, mud-flats, or oyster-beds. Even when visiting the mainland shore, which is not often, the bird confines its attention to the barnacle-covered rocks and high-lying mussel-beds. Its food consists of marine worms and crustaceans of various sorts, barnacles, limpets, and especially, mussels. Its stout, chisel-shaped beak enables it to force an entrance into the most refractory mussel shell, and to sever as by a knife the strong adductor muscles, which hold the valves together. Its feet also are large and strong, and the toes are provided with an elaborate set of pectinations which enable the bird to maintain a footing upon the most slippery rocks. If the foothold on a sloping rock is anyway precarious the bird retreats backward and uphill by means of these convenient calks.

These facts concerning the bird's habits are perfectly well known by those who know the bird at all; nevertheless, the name Oyster-catcher is unfortunate. We had a bill up at Olympia, session of 1907, to protect this and several other persecuted species. A learned Senator arose and addressed the upper house: "Gentlemen (hic) I am not in favor of this bill. The persecuted bivalve needs a (hic) friend. Why should we (hic) offer succor to its enemies? Gentlemen, I believe in protecting the (hic) oyster." Applause—amidst which "Black Oyster-catcher" is stricken from the bill.

A dozen pairs or such a matter of these birds are found among the San Juan Islands, but they never range further south on Puget Sound. Every islet and major reef of the Olympiades boasts at least one pair; while the larger rocks have from two to a dozen of them;—say a hundred pairs, all told, for the State. Nesting is in June, but the migratory movements, if, indeed, they do migrate, have not been reported on.

No. 284.

RED PHALAROPE.

A. O. U. No. 222. *Phalaropus fulicarius* (Linn.).

Description.—*Adult female in summer:* Entire underparts, except lining of wing, purplish chestnut; axillars and lining of wing white; region about base of bill, forehead, and crown blackish plumbeous; sides of head white nearly meeting on nape; upperparts, centrally, black with buffy and ochraceous edgings mostly in lengthwise patterns; wings plumbeous-gray; quills fuscous with white

shafts; the greater coverts tipped with white, the inner primaries white-edged basally, and the secondaries extensively white at base; upper tail-coverts black, with ochraceous tips centrally, plain cinnamon laterally. *Adult male*: Very similar, but smaller; white on sides of head reduced; crown and hind-neck streaked with ochraceous. *Adults in winter*: Quite different. Upperparts ashy, nearly uniform; wing darker ash or blackish, but with white bar as before; head and neck all around, and entire underparts pure white, or ashy-washed on sides only; a dusky space about eye, and another on hind head. *Immature*: Above dull black, with ochraceous edgings; wing-coverts, rump, and upper tail-coverts plumbeous,—the first bordered by buffy and the last by ochraceous; remainder of head and neck and lower parts white, tinged with brownish buff on the throat and chest (Ridgw.). Length about 8.00 (203.2); wing 5.35 (135.9); tail 2.15 (54.6); bill .86 (21.8); tarsus .80 (20.3); middle toe and claw .93 (23.6).

Recognition Marks.—Chewink size; lobate feet (in common with other Phalaropes); broadened sulcate bill distinctive; a little larger than the next.

Nesting.—Does not breed in Washington. *Nest*: a slight hollow in the ground, lined with a few bits of moss and grasses. *Eggs*: 3 or 4, pale drab or olivaceous, spotted and blotched with dark browns. Av. size, 1.25 x .88 (31.8 x 22.4).

General Range.—Northern parts of northern hemisphere, breeding from Maine northward and in Arctic regions, and migrating south in winter; in the United States south in the interior to the Middle States, on the Pacific Coast south to Cape St. Lucas; chiefly maritime.

Range in Washington.—Common migrant, but appearing chiefly in open water off the West Coast and in the Straits of Juan de Fuca.

Authorities.—Baird, Rep. Pac. R. R. Surv. 1858. IX. p. 707. T. C&S.

Specimens.—(U. of W.) Prov.

WE have only the most meager information as to the occurrence of this species in Washington, a specimen taken by Mr. Clark P. Streator at Ilwaco, Nov. 9, 1889, and two observed by Cooper as they swam in the surf after a storm, on Shoalwater Bay. The Red Phalarope is more exclusively maritime than the other members of this group, being found in the breeding season only along the coasts of the northern Atlantic and Pacific, and the Arctic Oceans. It is of necessity chained to shore for a season by the bonds of the reproductive instinct; but once the little family is reared, on some Arctic flat or bleak ice-bound islet, the Phalaropes gather in great companies and put out to the open sea. The dainty birds are expert swimmers, and are the most at home upon the water of any of the Limicolæ. Whalers affirm that the appearance of Phalaropes is a good index of the near presence of some large cetacean, especially of the Bow-head, or Right Whale (*Balæna mysticetus*), since the birds delight in the same sort of sea-forage as that upon which the whales subsist. Only the freezing of the Arctic waters induces these hardy adventurers to quit their frigid haunts; and if they wander down our coast in late autumn, it is only because time hangs heavy upon their wings until they may return to those enchanted seas.

No. 285.

NORTHERN PHALAROPE.

A. O. U. No. 223. **Lobipes lobatus** (Linn.).

Description.—*Adult female in summer:* Above and on sides of breast and sides (narrowly) slaty with a drab cast, blackish on back and scapulars, and edged here with light ochraceous; wings darker slaty gray, the greater coverts broadly tipped with white, forming a transverse bar; sides of neck and lower throat rufous,—pure on sides, more or less mixed with slaty gray on throat; chin and underparts entirely white; bill black; feet yellow, lobate and semipalmate, most extensively between middle and outer toes. *Adult male:* Similar, slightly smaller, and of duller coloration, save that the black of back is more decided, and the ochraceous edgings of upperparts deeper. *Adults in winter:* Without rufous; more extensively white; crown and auriculars (connecting below eye with a similar spot in front of eye) and median stripe of hind-neck dusky gray; the rest white; remaining upperparts blackish (centrally) and dusky gray, extensively edged and striped with cream-buff and white; wing-bar as before; sides of breast grayish clouded. *Immature:* Similar to adult in winter, but with more black above; breast usually tinged with buffy or brownish. Length 7.50 (190.5); wing 4.53 (115.1); tail 2.02 (51.3); bill .85 (21.6); tarsus .77 (19.6); middle toe and claw .80 (20.3).

Recognition Marks.—Chewink size; slaty gray, rufous, and white of head and neck in spring plumage; slender, black bill, less than one inch long, with scalloped feet, distinctive in any plumage.

Nesting.—Does not breed in Washington. *Nest:* a slight depression in the ground, lined with moss and grass. *Eggs:* 3 or 4, olive-buff or pale olive-gray, heavily speckled, spotted or blotched with dark brown. Av. size, 1.19 x .83 (30.2 x 21.1).

General Range.—Northern portions of northern hemisphere, breeding in Arctic latitudes; south in winter to the tropics.

Range in Washington.—Common migrant along the coast; less common on Puget Sound; occasional in the interior.

Authorities.—*Phalaropus hyperboreus* (Linn.) Temm., **Baird**, Rep. Pac. R. R. Surv. IX, 706. T. C&S. Di. B. E.

Specimens.—(U. of W.) Prov. Pl. B. E.

NOTHING can exceed the exquisite grace of this delicate bird as it moves about, not at the water's edge, like other waders which it so closely resembles in appearance, but upon the surface of a pool or even on the bosom of the deep. As it swims it nods with every stroke, turns at a thought to snatch some floating sea-morsel, or flits away with as little provocation as that afforded the bursting bubble of foam, its late brother. *T'alaskit*, the Quillayutes call them, and altho we presume the name has nothing to do with Alaska, the behavior of the birds as they pause for a moment and are off again is very suggestive of

that enticing land. The Indians claim that the birds nest along our own west shore, and the appearance of chance specimens in June is certainly a little puzzling, but we should sooner believe that such are mere wayfarers who have for some reason dropped out of the marching ranks of the Alaskan pilgrims.

By late July the Northern Phalaropes are back again in squads and platoons, feeding in the oil-slicks, which announce the presence of marine crustaceans, or else flitting up and down the Straits in care-free companies. On the 2nd of September, 1908, our boat, the *Princess Victoria*, encountered great numbers of these birds in the passage from Port Townsend to Victoria. The day had been foggy; the sea was barely ruffled; and as we plowed our way along, now trios and now scores of Phalaropes rose from our bows and settled again at no great distance. In alighting they almost invariably chose an oil-slick, or else the calm area surrounding a clump of drift-wood. Now and again we would pass alongside of such parties, well placed, and they would go on with their meal uninterrupted. These birds exhibit a nervous energy—perhaps we should say a dainty greediness in snatching their food from the water. Like all Phalaropes these feed with an alert dabbling motion, swinging rapidly from side to side, and turning at times so completely around that one suspects the bird must profit by the backward glance.

How these zealous gleaners have behaved themselves while in Alaska, we shall let Mr. Nelson tell us: "The female of this bird, as is the case with the two allied species, is much more richly colored than the male and possesses all the rights demanded by the most radical reformers.

"As the season comes on when the flames of love mount high, the dull-colored male moves about the pool, apparently heedless of the surrounding fair ones. Such stoical indifference appears too much for the feelings of some of the fair ones to bear. A female coyly glides close to him and bows her head in pretty submissiveness, but he turns away, pecks at a bit of food, and moves off. She follows, and he quickens his speed, but in vain: he is her choice, and she proudly arches her neck, and in mazy circles passes and repasses before the harassed bachelor. He turns his breast first to one side and then to the other, as though to escape, but there is his gentle wooer ever pressing her suit before him. Frequently he takes flight to another part of the pool, all to no purpose. If with affected indifference he tries to feed, she swims along side by side, almost touching him, and at intervals rises on wing above him, and, poised a foot or two over his back, makes a half a dozen sharp wing strokes, producing a series of sharp whistling noises, in rapid succession."

When at last this modern Adonis becomes a benedict, he not only shares in the labor of constructing a nest, but is actually set to the task of incubating the eggs, while his care-free spouse enjoys club life at a neighboring pool. We are glad, on the whole, that these perilous precedents are set only in the wilds of Alaska, where of course bachelors are proverbially shy.

No. 286.

WILSON'S PHALAROPE.

A. O. U. No. 224. *Steganopus tricolor* Vieill.

Description.—*Adult female in summer:* Top of head and upper back pearl-gray; nape and upper tail-coverts white; a white supraloral line; a black stripe starting from before eye passes backward, becoming broader on side of neck, changes to deep chestnut on hind-neck, and continuing backward over shoulder, is interrupted and dispersed over the scapulars; rump and wings grayish brown, the latter with a very little white edging; tail still lighter gray-brown; a reddish brown wash across throat and chest and sometimes sides, as tho the coloring matter of the hind-neck had "run"; remaining underparts pure white; bill black; feet brownish. *Adult male in summer:* Similar to female but smaller, lacking the pearl-gray and chestnut,—slaty-gray and rusty instead; general appearance of back and wings brownish gray, with blackish centers of feathers and some ochraceous edging; black on sides of head and neck almost obsolete; rufous tinge of chest very slight. *Adults in winter:* "Above plain ash-gray; upper tail-coverts, superciliary stripe, and lower parts white, the chest and sides of breast shaded with pale gray. *Young:* Top of head, back, and scapulars dusky blackish, the feathers distinctly bordered with buff; wing-coverts also bordered with pale buff or whitish; upper tail-coverts, superciliary stripe, and lower parts white, the neck tinged with buff" (Ridgw.). *Adult female* length 9.70 (246.4); wing 5.23 (132.8); tail 2.03 (51.6); bill 1.40 (35.6); tarsus 1.38 (35.1); middle toe and claw 1.20 (30.5). *Adult male* length 8.75 (222.3); wing 4.60 (110.1); tail 2.17 (55.1); bill 1.25 (31.8); tarsus 1.20 (32); middle toe and claw 1.06 (26.9).

Recognition Marks.—Chewink to Robin size; pearl-gray, chestnut, and black in masses distinctive in adult female. This bird superficially resembles the preceding in some of its plumage; its larger size and especially longer bill, and larger feet, as well as really different color pattern, should be noted.

Nesting.—*Nest:* a shallow depression in the earth lined sparingly with grass, or not. *Eggs:* 3 or 4, grayish or brownish buff, speckled, spotted, and blotched with dark brown. Av. size, 1.30 x .90 (33 x 23). *Season:* c. June 1st; one brood.

General Range.—Temperate North America, chiefly the interior, breeding from northern Illinois and Utah northward to the Saskatchewan region; south in winter to Brazil and Patagonia.

Range in Washington.—Not common summer resident on the East-side.

Authorities.—["Wilson's phalarpe" (sic), Johnson, Rep. Gov. W. T. 1884 (1885), 23.] **Johnson**, (R. H.), Condor, Vol. VIII, Jan. 1906, p. 27.

Specimens.—(U. of W.) C.

MOST exasperating fowls! But what else could you expect of a freakish bird family which reverses nature's law and lets the girls do the courting? It happened—or rather, it didn't happen—in this wise. On the 1st of June, 1905, at a point on Brook Lake where the wading

boots cease to splash, but still make a noise like bovine osculation. I came upon the Wilson Phalarope—two of him and two of *her*. The male bird doesn't count in Phalarope society, at least when it comes to voting.

The birds were evidently paired and, as manifestly, had local attachments for that particular stretch of grass and weeds and ooze. One pair lit near me as I was photographing a Black Tern's nest, and the male began to poke about in the reeds, like a hen that has forgotten, or pretends to have forgotten, the precise location of her nest. The female dogged his steps and he occasionally chased her off in a petulant way, precisely as a female of any more rational species would have done under like circumstances. Finally, the male housewife disappeared in a certain clump toward which he had already twice feinted. The female came to a standstill and mounted guard for as much as ten minutes. The situation was perfectly clear from an oölogical standpoint. The eggs were being covered until it suited my pleasure to claim them. Imagine my surprise, therefore, when the female suddenly flitted over the weeds to a more distant clump, to which her dutiful spouse had sneaked, routed him out and made off with him to parts unknown.

On succeeding days I raked that neck of the swamp with a fine-toothed comb, but all to no avail. The birds came and went without rhyme or reason, now one, now two, and now all four at once, from I knew not where, and disappeared again as mysteriously. If they lighted, the reeds swallowed them up; if they flew, they did it in a demure way which was a rebuke to curiosity. In flying, a bird would sometimes give voice to its disquiet in a sort of hoarse, barking note, a rough monosyllable, *twib*, which was also occasionally subdued to a mellow croak, *oont*. This was often a summons, and if uttered by a single bird aloft, would serve to rouse its mate from some recess of the grass; whereupon both would flit away, as tho renouncing all claim to that locality.

As it happened once, so it happened a dozen times; and a like experience befell upon each of two succeeding Junes, when, with another experienced bird-man, I returned to the quest. The same(?) four birds were there, riveted in interest to the same locality. They came and went in the same mysterious, casual fashion. They treated us with the same studious neglect. And as to their nesting habits we are never a whit the wiser. Wherefore, I repeat, these be most exasperating fowls! Also, we resign our claim upon them. If any one is curious to follow their fortunes, we will cheerfully furnish the street and number where this disappearance syndicate was last heard from; viz., Grassrue 23, Weedstem 13.

No. 287.

POMARINE JAEGER.

A. O. U. No. 36. *Stercorarius pomarinus* (Temm.).**Synonyms.**—POMATORHINE JAEGER. POMARINE SKUA. GULL-HUNTER.

Description.—*Adult, light phase:* Top and sides of head, upperparts (except back of neck) and crissum brownish slate or dusky; rest of head and neck and underparts white; the region of ear-coverts and around on hind-neck tinged with straw-yellow; central feathers of tail projecting three or four inches beyond most of the others, their breadth sustained to the abruptly rounded tip; bill horn-color tipped with black; feet and legs black. *Adult, dark phase:* Entirely brownish slate, except sides of head and hind-neck often tinged with straw-yellow as before. *Young, light phase:* Upperparts brownish dusky, the feathers of the back sparingly tipped with whitish or dull buffy; those of the rump and upper tail-coverts spotted and barred with the same; head, neck and underparts dull buffy, everywhere barred with dusky. *Young, dark phase:* Entirely brownish slate, the underparts more or less barred with whitish or dull buffy. In the young of the year the central tail-feathers do not project beyond the others more than half an inch or such a matter. The light and dark phases described above do not represent actual dichromatism, such as exists in the case of the Screech Owl, but only extremes of coloration within which every intermediate condition may be found. The commonest form is one in which the chest is sparingly, and the sides of the breast, hind-neck, and sides are heavily barred with dusky and buffy. Length 22.00 (558.8); wing 13.75 (349.3); tail 8.25 (209.6); bill 1.55 (39.4); tarsus 2.10 (53.3).

Recognition Marks.—Large Crow size (size of California Gull); uniform dusky or dusky-and-white coloration; central tail-feathers elongated, *not* tapering; bill rather small for size, sharply hooked, and provided with thin "cere." Predatory in habit; oftenest found harassing other birds of same family.

Nesting.—Does not breed in Washington. *Nest:* on the ground, of grass and moss. *Eggs:* 2-3, pale olive-green or deep olive-drab, sparingly spotted with slate-color and two shades of umber, chiefly at the larger end, where they become confluent (Brewer). Av. size, 2.30 x 1.67 (58.4 x 42.4).

General Range.—Seas and inland waters of northern portions of the northern hemisphere; south in winter to Africa, Australia, and probably South America.

Range in Washington.—Rare migrant,—two records only.

Authorities.—Dawson, Auk, XXV, Oct. 1908, p. 484 (Dr. A. K. Fisher *in epist.*).

Specimens.—(P. Alaskan).

FISHER-FOLK, because of their exposed situation, have ever been at the mercy of pirates and free-booters; and the same rule obtains in the bird-world as among men. The Bald Eagle stands ready to relieve the Fish Hawk of his hardly-won prey, and the Man-o'-War Bird sweeps the southern main on a perpetual quest for fish-laden Gannets and Pelicans. In the northern waters the gentlemen of the sea are the Jaegers—hunters. Here upon wings

marvelously swift and cruelly graceful, the little corsairs hurry to and fro to observe which of their fisher-friends has made a catch, and to make instant requisition for it. It may even be a Glaucous Gull that has just swallowed a herring, and if detected in the act the Gull moves off screaming, while the little bully darts at him repeatedly, and prods and browbeats him until he is glad to disgorge for the sake of being rid of his persecutor.

The Kittiwake Gull is the acknowledged thrall of this rapacious viking, and if his eggs or callow young escape the devouring beak, it is only that they may henceforth share the spoils of the sea with their merciless master. Bullies are also cowards, and it pleases us to learn that this larger species stands in awe of its lesser kinsmen, the Parasitic, and the Long-tailed Jaeger, and that it has to submit to a drubbing now and then at the hands of one or another of these peppery assailants.

Jaegers follow their victims southward in the fall, but the Pomarine is everywhere less common than the other species in western waters, and it seldom comes so far as the Straits of Juan de Fuca, altho it has been taken on the coast of California.

No. 288.

PARASITIC JAEGER.

A. O. U. No. 37. *Stercorarius parasiticus* (Linn.).

Synonym.—RICHARDSON'S JAEGER.

Description.—Quite similar to preceding species in general appearance of plumage and in color phases; smaller; the central pair of tail-feathers elongated about three inches beyond others and *tapering*; light phase not so dark as in *S. pomarinus*.—fuscous rather than dusky, thruout, except top of head and lores, which are blackish. Length 15.00-21.00 (381-533.4), av. 17.00 (431.8); wing 13.00 (330.2); tail 7.50 (190.5); bill 1.20 (30.5); tarsus 1.80 (45.7).

Recognition Marks.—Crow size, but appearing larger; marks much as in preceding species, but *central pair of tail-feathers sharply pointed*, produced about three inches beyond others (not nearly so long as in the Long-tailed Jaeger, *S. longicaudus*).

Nesting.—Does not breed in Washington. *Nest*: on the ground. *Eggs*: 2 or 3, "olive-drab to green-gray and brown, marked with several shades of chocolate brown, and an obscure stone-gray, distributed over the entire egg." Av. size, 2.30 x 1.65 (58.4 x 41.9).

General Range.—Northern part of northern hemisphere, southward in winter to South Africa and South America. Breeds in high northern districts, and winters from New York and California southward to Brazil.

Range in Washington.—Common spring and fall migrant on Puget Sound and West Coast.

Migrations.—*Spring:* May, May 27, 1907; May 5, 1908; May 13, 1908 (Seattle). *Fall:* Aug. 31-Sept. 30, 1904 (Blaine); Sept. 9, 1908 (Victoria).

Authorities.—Edson, *Auk*, Vol. XI, Jan. 1894, p. 73. B. E.

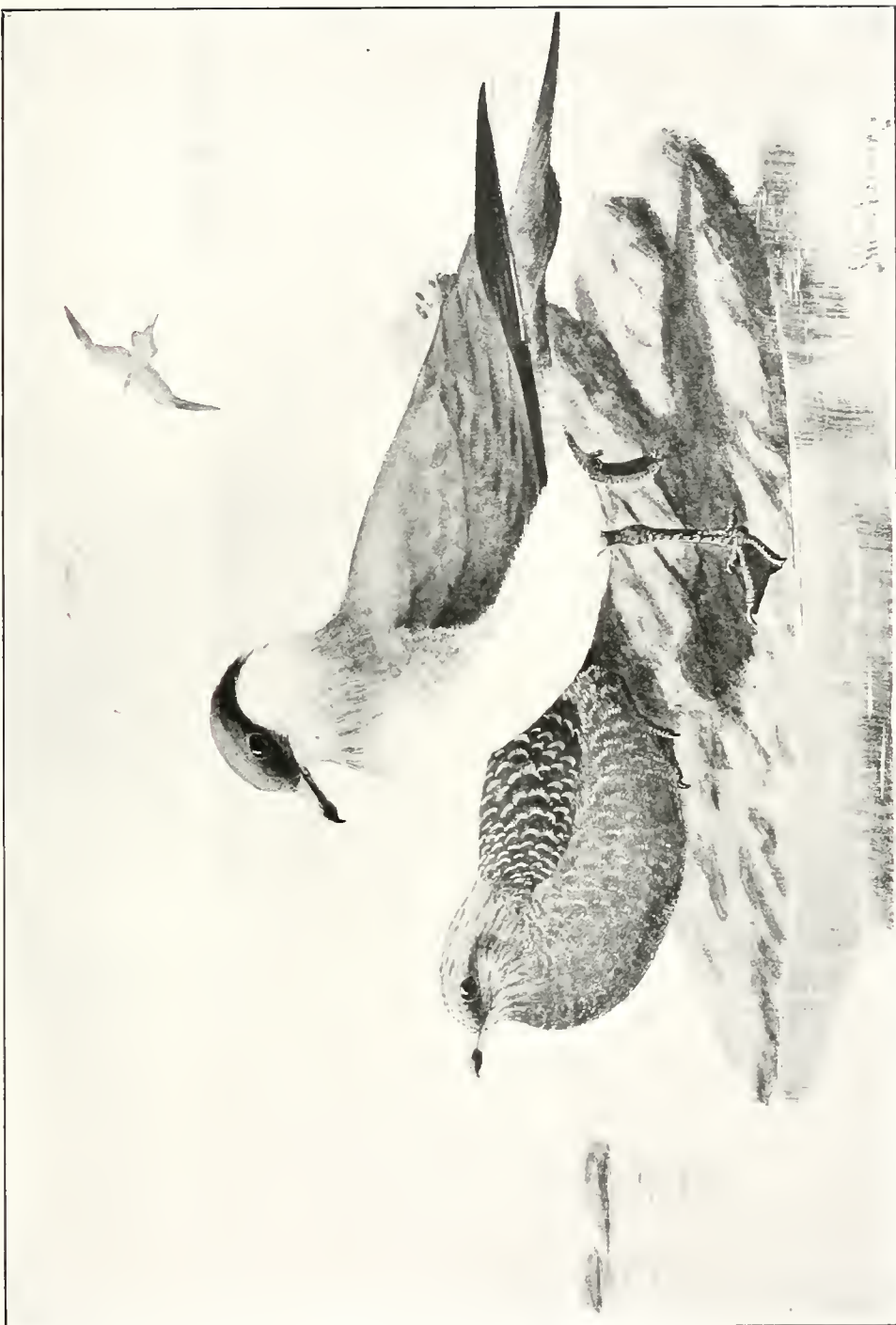
Specimens.—Prov. B. E.

HARD upon the migrating hosts of Terns come these cruel tyrants of the sea, the Jaegers. Despicable in that they have turned traitor to their own kind, and in that they harass the least as well as the greatest of that kind, they nevertheless provoke admiration and astonishment by their gracefulness, their skillfulness, and their saucy bravado. Every line in the Jaeger's make-up is cut for speed. Once its gleaming, covetous eye is cast upon a victim, it is no question of escape, but only a matter of detail in the terms of capitulation.

A tern catches a herring, and while it is disposing of its catch, the free-booter hurries up and dives at the tern suggestively. The Jaeger makes no attempt to snatch the fish, but it dives under its victim, jostling it each time, and forcing it up into the air. The tern twists this way and that, screaming protestingly, but anon drops the fish, which the Jaeger snatches deftly in mid-air. Not content with this ransom, which is instantly bolted, the bandit demands to know whether the victim has any more fish secreted about his person, and harries the hapless wight until the contents of the crop are disgorged, or, if already empty, until the victim clearly establishes his poverty.

Jaegers frequently hunt in pairs, and when so fortified are able to successfully handle much larger subjects. A Glaucous-winged Gull could nearly eat a Jaeger alive, if he could only get at him. But the parasites are too adroit, too elusive, and too desperately persistent. The Gull hates to do it, but also he hates to be buffeted and hustled away from the fishing-grounds: "Here, take it, you scum, and be off with you!"

Parasitic Jaegers pass thru our borders in immense numbers in May and again in September. They do not, of course, move in flocks, like terns, for no territory could support such wholesale brigandage; but at the height of the season, one may see a dozen birds in the course of a steamboat ride from Tacoma to Seattle, or a hundred between Seattle and Victoria. The Jaegers are not dependent alone upon forced charity, for they devour offal on shore, or glean tidbits from the surface of the water, quite after the fashion of other gulls. Upon discovering a morsel below, the Jaeger checks its flight suddenly, with a display of the characteristic tail-feathers which is quite gratifying to the watchful student, and it settles daintily upon the water to investigate at leisure or to snatch and rise with perfect grace. In its northern home, the lowlands and coastal marshes of Alaska, it is said to hunt a great deal inshore, where it catches shrew-mice, lemmings, and even small birds. It is also very fond of eggs, and destroys great numbers of them in the course of a season, not only those of kittiwakes and murre, but of ducks and snipe as well. On



PARASITIC JAEGER.

cloudy days or in the Arctic twilight, preceding the time of departure for the South, these birds are said to utter doleful wailing cries, interspersed with harsh shrieks; and these are among the most characteristic sounds to be heard in the teeming, tragic North.

No. 289.

PACIFIC KITTIWAKE.

A. O. U. No. 40. *Rissa tridactyla pollicaris* Ridgw.

Synonym.—KITTIWAKE GULL.

Description.—*Adult in summer:* General plumage pure white, the mantle^a deep pearl-gray; five outer primaries with terminal portion black, the breadth of black area on first primary about three inches, decreasing to .85 in the fifth; the first black on the outer web also; the fourth and fifth narrowly tipped with white; bill light yellow clouded with olivaceous; legs and feet blackish; the hind toe well developed but minute; iris reddish brown; eye-ring red. *Adult in winter:* Similar, but sides of head and hind-neck overlaid with dark gray or plumbeous, and with plumbeous-slate around eye, most sharply in front. *Immature:* Terminal portion of tail, and exposed portion of primaries exhibited by folded wing, black—the four outer primaries extensively white on inner webs, the color encroaching upon outer web and upon tip of the 5th, black vanishing with subterminal bar on 6th; a long black patch formed by bastard wing, lesser and median wing-coverts, and portion of secondaries; a broad bar of black on lower nape, and broad dabs of the same on sides of neck; some black smearing about eye, bill black. Length 16.00-17.50 (406.4-444.5); wing 12.00 (304.8); tail 4.80 (121.9); bill 1.35 (34.3); tarsus 1.35 (34.3).

Recognition Marks.—Crow size; blackish feet of adult; solid black of extreme wing-tip; black less extensive than in *Larus delawarensis*.

Nesting.—Does not breed in Washington. *Nest:* on ledges of rocky cliffs, of grass, moss, and seaweed. *Eggs:* 3 or 4, yellowish or olive-buff, pale greenish gray, etc., with spots and blotches of chocolate-brown and obscure lilac. Av. size, 2.26 x 1.61 (57.4 x 40.9).

General Range.—Breeding on the coasts and islands of Bering Sea and the North Pacific; south irregularly in winter, not commonly as far as Victoria, but occasionally to southern or even Lower California.

Range in Washington.—Rare winter visitors on Puget Sound and West Coast.

Authorities.—[“Pacific kittiwake,” Johnson, Rep. Gov. W. T. 1884 (1885), 23.] **Anthony:** Auk, XXIII, April 1906, p. 130. L². E.

Specimens.—(U. of W.) Prov. C. E?

a. A term used to designate the plumage of the back, scapulars, and wings collectively, and which is often differently colored from that of the remaining parts in birds of this family.

WHILE one of the most abundant species thruout the islands and coasts of Alaska, these birds are somewhat erratic in their winter dispersion, altho keeping in the main as far north as possible. Specimens are occasionally sighted on the Straits of Juan de Fuca, where they join the crowd of gulls accompanying outgoing steamers; and there are several records of their occurrence at Bellingham. In December and January of 1898-99, Mr. A. W. Anthony saw them "by the dozens" in the harbor and about the garbage dump of Seattle, and supposed that they were characteristic species, but we have never seen them so far south.

Of their occurrence in Alaska Mr. E. W. Nelson says: "They pursue their prey in the same graceful manner as the terns, by hovering over the water and plunging down head-foremost. It is an extremely interesting sight to watch a large flock passing over calm water in this manner. They are limited strictly to tide-water and rarely ascend even the Yukon delta over a few miles.

"Thruout its range this species has considerable curiosity and comes circling about any strange intruder to its haunts. In the bay at Saint Michaels they were frequently seen following a school of white whales, evidently to secure such fragments of fish or other food as the whales dropped in the water. It is curious to note how well the birds timed the whales and anticipated their appearance as the latter came up to blow."

No. 290.

GLAUCOUS-WINGED GULL.

A. O. U. No. 44. *Larus glaucescens* Naum.

Synonyms.—COMMON GULL. HARBOR GULL. BLUE GULL. BURGOMASTER (name properly restricted to *L. glaucus*).

Description.—*Adult in summer:* Mantle pearl-gray (of about the same shade as that of *L. argentatus*); wing-tip chiefly gray, of about the color of back—in particular: 1st primary nearly uniform pearl-gray with a large sub-terminal spot of white on both webs, separated by gray band from white tip, 2nd, 3rd, and 4th primaries ashy gray terminally, changing thru white (narrowly) to pearl-gray of basal portion, tipped with white; 5th and 6th as in preceding, but ashy gray subterminal portion narrower, and contiguous white broader; remaining primaries and secondaries color of back with broad white tips. Remaining plumage pure white; bill yellow, a rounded spot of bright vermillion at angle of lower mandible, this usually shadowed above by a dusky spot (this dusky spot is the last persistent trace of adolescence; it is sometimes larger than the red spot in specimens otherwise perfectly adult, and only the oldest birds are entirely without it); feet dull flesh-pink, or pale purplish rosy; irides brown, of varying shade. *Adult in winter:* Head, neck, and breast, but not throat, obscurely (or, rarely, heavily) clouded with light grayish dusky.

Downy young: Bill and feet black; down chiefly grayish white, upperparts spotted and striped in intricate but characteristic pattern with grayish black. *Young-of-the-year:* Bill black; plumage grayish dusky, nearly uniform below, but above varied by coarse spotting of dull white and (or) pale buffy. *Second year young:* As in preceding but bill flesh-colored basally; plumage lightening and clearing somewhat irregularly, but wings and tail darker by contrast; the tips of the primaries dusky gray, sometimes appearing almost blackish. *Approaching maturity:* Upperparts ashy- to pearl-gray, but some clouding of dusky on wing-coverts; terminal portions of primaries of darker gray than in adult and not distinctly white spotted and tipped; underparts more or less marked with dusky; bill blackish, clearing (yellow) except in subterminal band, where black persistent in diminishing area. Length of adult very variable: 23.00-28.00 (58.4-71.2), average about 26.50 (67.3.1); wing 16.00-17.40 (40.4-44.2); bill 2.10-2.60 (5.3-6.6), depth at angle .70-.90 (1.7-2.2.9); tarsus 2.65 (6.7.3).

Recognition Marks.—The commonest Gull; absence of black in wing distinctive. Smaller and more darkly colored than *L. glaucus* (II); 2nd primary narrowly tipped with white as compared with *L. nelsoni* (II).

Nesting.—*Nest:* of grass, etc., scanty or abundant, placed on sloping hill-side or upon rock-ledge of island or promontory, coastwise. *Eggs:* 3 (second sets 2), ovate or short ovate, grayish, greenish, buffy, or pale olivaceous as to ground color, boldly and heavily and irregularly spotted and blotched, or lightly round-spotted, with rich browns (superficially) or gray-browns (deep-seated). Av. size, 2.90 x 2.00 (7.3.7 x 5.0.8). *Season:* June; one brood.

General Range.—Both coasts of the North Pacific and Bering Sea, breeding on the American side from Washington northward; south in winter to California and Japan.

Range in Washington.—Abundant winter resident and migrant on Puget Sound and the harbors of the West Coast; occasional in the interior; breeding sparingly on the San Juan Islands, and commonly on the Olympiades south to Destruction Island.

Authorities.—Baird and Lawrence, Rep. Pac. R. R. Surv. IX. 1858, p. 843. T. C&S. L. Rh. Kk. B. E.

Specimens.—P. Prov. B. BN. E.

TO the West-sider at least, there is no bird whose appearance calls up in review such a swift pageant of beauty and romance as that of the Glaucous-winged Gull. The inhabitant of a seaport town knows him as an *habitué* of harbor and wharfage; the excursionist knows him as a picturesque accompaniment of travel by water; while the adventurer knows him as the rightful owner of those storied battlements of stone which line and guard our western shores.

To the city man, especially, the gull is the one visible point of contact with the Great Beyond of Nature. Pray, consider what a benevolent miracle it is that these most improvident of God's creatures, the birds, are impelled to loiter for a season about the doorstep of a great city. These thronging docks upborne by close-set piles, and housing the wares of Occident and Ind, what are



Taken on Carroll Islet, one of the Olymphiades.

Photo by W. Leon Dawson.

THE HOME OF THE GLAUCOUS-WINGED GULL.

they but the very ramparts of order, the symbolical breastworks of organized human industry now millenniums old! And yet, upon a wooden pedestal hard by sits a gull, serene, sedate, unhurried, a son of the wilderness gazing upon you with level eye, and rebuking by his very blue-gray calm the pomp and madness of men.

You have escaped for the nonce from the counting-room fetid with usurious plots; his business has always been conducted in the open, his many farings *viséd* by the sun, and his lodging places purified by the gentle rains.



Taken in Seattle.

Photo by the Author.

YOUNG BURGOMASTERS.

You are concerned about your clothing, and you dress laboriously for "the occasion"; his wardrobe is always on his back, well-fitting, seasonable, and "correct." You, poor human, are worried about the increased cost of living; His Opulence, the Gull, fares fat on what you squan-

der, and yawns contentedly over a full crop. As for revels, what more giddy whirl than the aerial dance of the white-winged watchers, as they welcome an incoming steamer, or divide the cook's largess on the churning waters! What! You tired-eyed galley slave of Fortune, you spent son of Ambition and dull Care! Consider the sea-gulls, how they fare and forget yourself—for an hour.

The gulls are mother Nature's pledge that she has not forgotten us. The sparrows gibbering in the street yonder are scant comfort to the human heart;—outcasts they are, mere collocations of soil and smut, inane, blatant, futile. But here, where sea meets shore, Nature deals kindly with us and sends dainti-

ly liveried messengers to prophesy of a world beyond. White for purity, pale blue for tremulous hope and reminiscence of heaven (when skies are dull); these, with a little black for tagging—recognition marks—compose the dainty costume of a full grown gull. The murky flood below gnaws sulkily at the underpinning of the wharfage, or recoils in turbid fright from dark secrets of vegetable outlawry; but the sea-birds, hovering over, spotless, graceful, debonair, make us forget our partnership of guilty knowledge, and pledge us to visions of the limpid ocean, all powerful and all purifying.

To and fro, forward and back, in and out, up, down, and around, moves the restless multitude



*From a Photograph, Copyright, 1908, by
W. L. Dawson.*

FACING THE TIDE.
GULLS IN EAST WATERWAY, SEATTLE.

when the hungry mood is on,—a twirling kaleidoscope of action. And, while the gulls are no songsters, not the least of their charms lies in the manifold cries, trumpet calls, croaks, barks, and screams, with which the birds mark the progress of their quest. And when a treasure of floating biscuits is discovered, how the screams rise to a grand medley of stridor, fierce, exultant, like the triumph of Tritons over smitten reefs!

Truth to tell we owe the continued presence of our thousands of sea-gulls thru the winter chiefly to the activities of our packing houses, and to the fact that the city's garbage is dumped daily at the advancing edge of the tide lands. At the dumping grounds the arrival of each loaded cart, in charge of Antonio or Pietro, is greeted with a double Chautauqua salute of fluttering wings, and hoarse huzzas besides. Pandemonium reigns until the tide has divided the spoil, and these children of the second table have all been fed.

Toward noontide, when the Italians have given over their task, the birds retire according to their kind, to foregather with their fellows for the midday siesta, which is an essential part of every well-regulated bird-day. The Mews assemble on the water in some open space and ride at anchor, or else rehearse in gabbling, duck-like tones the memories of Alaska. The Glaucous-wings line the railings in solemn rows, or else betake themselves to some retreat of inaccessible piling. Here, each on a pillar like St. Simeon Stylites, they ruminate and slumber till the pangs of returning hunger impel them once again to action. The California Gulls prefer to muster on the made lands or open tide flats. Here their white battalions of rest afford a pleasing contrast to the squalor of commerce behind them.



Taken in Seattle.

Photo by the Author.

THE GULLS' GRILL-ROOM.

One marvels at the boldness these harbor gulls at times display, especially when a touch of winter has made us all akin. The man who minds his own business may sometimes pass within six feet of sitting birds,—pass, not pause. For let him stop but that fraction of an instant necessary to adjust a focus, and the wary birds are off, their minds poisoned by dark suspicion. When the great hunger is on, it is possible to bait the gulls to the camera in many ways; but when that aching void is filled, all direct efforts at acquaintance are futile. Thinking to effect an *ensemble* piece, I once dumped a keg of choice “seconds” from the rails of a packing house. The sun was bright, the camera set, and the focus chosen. The gulls burdened every pile and timber in the vicinity; and yet as that wanton meat floated off on the tide, the pampered birds only leered foolishly at it, and resumed their meditations.

But it is not alone as pensioners of the city's untidy soup kitchen that we may know the gulls. Altho undoubted children of the sea, the gulls have certain Limicoline affinities, which lead them to seek the vicinage of ponds and fresh water shallows. That is to say, the ur-ancient ancestor of the gulls was a swamp-loving bird, and the gull is but answering the primeval call when it forsakes the sea to idle about in flooded meadows or to haunt some alluvial bar. On a lush day in early spring I have seen hundreds of these adventurers pattering about the dank gardens at Malmo's, now stopping to gaze at their images in the shallow mirrors of a recent rain, now wading into the ooze and treading it in an apparent ecstacy of delight over its squashiness.

At another time the whim of the aeronaut may seize whole companies of gulls, and they will sail about over the city, gyrating by the hour in utter aimlessness save such as actuates park strollers on a summer afternoon.

We may not follow now as our Gull hovers over or trails after any one of the scores of boats which ply the waters of Puget Sound, but must hasten with him in May to the nesting islands, the San Juans and the Olympiades. Many birds lay aside their natural reserve and invite confidence, where they do not actually throw themselves upon human protection, at nesting time. Not so with our gulls. Whether upon Waldron Head, Skipjack, Gull Island, or upon the precipitous rocks of the western coast, the gulls are suspicious, wary, and irreconcilable. Enter one of their colonies, and behave you never so amiably, even to the point of accepting unoffered hospitality for a week, it is all one. You are an enemy and the gull is unforgiving. Generations of abuse have ingrained this conviction into the gull's breast, and the just must suffer with the unjust until the average of humanity rises.

Of course the aborigine has been at fault here; but the little finger of the white man is as the loins of the Indian, when once his cupidity is aroused. Williamson Rock and the Bird Rocks, lying in Rosario Straits, have been so often robbed that their inhabitants flee at a shadow; and it is a bold bird that nests on Viti, within reach of the motor-boaters of Bellingham. Fortunately, a

saner spirit is beginning to be manifest, and the Government intervened in the fall of 1907 in behalf of the persecuted sea-fowl of the west coast.

Nothing in the domain of ornithology can exceed the romantic interest of a sea-bird island. When to the stubborn challenge of the rock itself and the screaming of the apprehensive fowl, is added the majestic sub-dominant of the roaring sea, you have a thing to stir the hearts of vikings. It was the wine of



Taken on Carvell Islet.

From a Photograph, Copyright, 1907, by W. L. Dawson.

NEST AND EGGS OF GLAUCOUS-WINGED GULL.

adventure, no doubt, as well as the underlying necessity for food which prompted an Ozette Indian to scale "Peechwah" within recent memory; and which tempted the young Quileutes of a bygone generation to sack Cake Island, whose sides appear "more than perpendicular."

Once at home, the gulls nest almost anywhere, save that they have not yet been driven into trees, as is the case along the Maine coast. Sloping, grass-

covered hillsides are favorite places, and the seclusion of underbrush is not despised; but the sculptured chambers of sandstone hollowed by the high-flung chisels of the winter's storms, constitute the ideal setting for a gull's nest. The eggs, barring mishap always three in number, are in color and markings skillful epitomes of their average surroundings. The chicks, likewise, are marked for obliteration. They have, moreover, a faculty of absolute movelessness on occa-



From a Photograph, Copyright, 1908, by W. L. Dawson.

PEECHWAH, ONE OF THE OLYMPIADES.

GULLS STARTLED BY REPORT OF GUN.

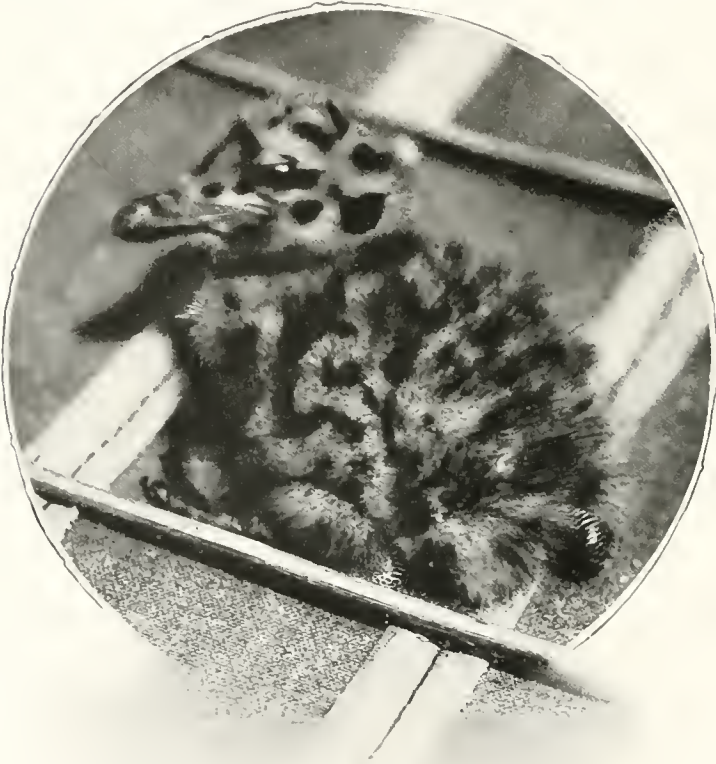
sion, which those of us who are parents ardently covet for our six-year olds.

Gull discipline can be very stern while danger lasts; but once let the parents suppose themselves unobserved, and they will lavish every attention upon their offspring. The fish-laden bird returning from the chase, first disgorges his catch of smelt or the like upon a convenient spot; then in a wheedling voice summons the chicks from hiding. They come skipping up like kids and fall to, while the doting parents dance attendance and utter incessant blandishments. And after the youngsters have stuffed themselves to repletion,

the mother still urges, "Can't Mama's darlings eat just one more fishy?" until the beholder, recalling the ways of his own kind, is almost nauseated.

Gulls are credited with "screams" or "cries," but it is not, perhaps, generally understood that the notes of different species are distinctive; or that each species possesses a considerable vocabulary, with which to voice the major

emotions. This fact was forced home upon the writer only when he lay in camp, a voluntary Crusoe for a week, on a bird rock of the lower Sound. Here, since there was nothing to be heard save the murmuring voices of the sea, the hissing of Pigeon Guillemots, and the notes of the Glaucous-winged Gulls, it is not surprising that the last-named began to fall into some sort of order, with dawning significances, as the week drew to its close. At the



Taken in Rosario Strait.

Photo by W. L. Dawson.

SMARTY.

risk of wearying the reader, since the experience is possibly unique, I venture to enumerate the leading sounds, or phrases, of this little-known gull tongue:

The *beak-quaking notes*—harsh, unmusical, and of moderate pitch, used to express distrust and continued disapproval. During delivery the mandibles are brought together three or four times in moderate succession. This is the

ordinary scolding, or distress cry, of characteristic and uniform pitch, save that it is raised to a higher key when the speaker becomes vehement. The phrase varies from three to five notes, and is uttered in the following cadences: *kak'-akó; ka'ka; ka'ka kakka'; kakak', ka'kakak'; kak'-a-kak'-a-ka.*

Kawk.—A note of inquiry or mere communication; has many modifications and varies from a short trumpet note to the succeeding.

Klook.—A sepulchral note of unfailing interest but uncertain meaning.



Taken on
Williamson Rocks.

Photo
by the Author.

ANOTHER NEST, SHOWING VARIATION IN COLOR OF EGGS.

The *trumpet notes*, long or short, single or in prolonged succession, high-pitched, musical, and far-sounding. During delivery the head is thrust forward, the neck arched, and the throat and mandibles opened to their fullest capacity. These are pleasure notes and are used especially on social occasions when many birds are about—*kleer, kleer, kleer, kleer.*

A(n)k, a(n)k, a(n)k, a(n)k, a(n)k, a(n)k—minor trumpet notes of regular length and succession, used in expostulation or social excitement, frequent and varied.

Klook, klook, klook—in quality a combination of *kawk* and the trumpet

tones, uttered deliberately and without much show of energy. Used chiefly in domestic conversation of uncertain import.

Orcé-ch, orcé-ch, orcé-ch, añ añ añ—An expression of greeting as when uttered by a sitting bird welcoming one about to alight. The notes of the first series are trumpet tones in which the second syllable of each member is raised to a higher pitch, while the voice is dropped again on the third. The second series is lower and more trivial but still enthusiastic as the congratulatory to the guest arrived.

Ko—shouted once, or thrice repeated, in quelling a clamor. "Hist! Hist! You're making too much noise; he's watching us."

Arahh—a slow and mournful trumpeting, usually uttered aving to express anxiety or grief, as at the loss of a chick.

Oo anh, oo anh—repeated indefinitely. Notes of coaxing and endearment usually addressed to children, but occasionally to wedded mates. The cooing of doves does not express so much adulation, or idolatrous devotion, as the gull throws into these most domestic tones.

Glaucous-wing is the gull *par excellence* of Washington. Indeed, the familiar, note-book shorthand "G. W. Gull" deserves to be expanded into George Washington Gull, by way of loyalty. No other gull is known to nest on the islands of the lower Sound, where ten or a dozen small colonies of this species remain. Among the Olympiades there are ten principal colonies, boasting in the neighborhood of eight thousand birds all told, while detached groups and scattered pairs haunt practically every available rock from Destruction Island northward.

The nesting colonies comprise adult birds exclusively; and since the juveniles are practically absent from the harbors in summer, Washington knows nothing of their whereabouts at that season. Early in the fall both adults and young begin to appear in the harbors and inland waters, and their numbers increase steadily until, by the time winter is established, they outnumber all other species, save *L. brachyrhynchus*, ten to one. As nearly as we can determine, however, the locally breeding adult birds retreat down the coast and their place is supplied by others from the North. In this species, moreover, the succession of size appears to reverse the usual order, inasmuch as the southern-bred birds average larger.



From a Photograph, Copyright, 1907, by W. L. Dawson.
A NATURAL FRIEZE.
GLAUCOUS-WINGED GULLS ON RAILING, SEATTLE.

No. 291.

WESTERN GULL.

A. O. U. No. 49. **Larus occidentalis** Aud.**Synonym.**—WESTERN HERRING GULL.

Description.—*Adult*: Mantle slaty gray or plumbeous slate, most intense in fresh spring plumage, sharply contrasting with terminal white of secondaries and tertials; the first three primaries black on exposed portion, the outer one white for about two inches subterminally, crossed distally by irregular black bar, and tipped with white; the 2nd and succeeding narrowly tipped only with white; the black disappearing on 6th; remaining plumage pure white (hind-head and neck streaked, or not [?] with dusky in winter); bill stout and deep with very convex culmen and strongly marked angle; irides brown; feet pale purplish rosy or flesh-colored. *Downy young*: Much as in preceding, but markings more brownish black. *First plumage*: "Above brownish slate irregularly spotted with grayish white; remiges, rectrices, and primary coverts, uniform dull black, narrowly tipped with white; lower parts brownish gray, clouded or irregularly spotted with grayish white—the breast and abdomen sometimes nearly uniform grayish. Bill dusky black terminally, flesh-colored basally." In other transitional juvenile plumages black of bill and blackish brown of primaries and tail most persistent. Length of adult 24.00-27.00 (609.6-685.8); wing about 16.50 (419.1); bill 2.25 (57.2), depth at angle .88 (22.4); tarsus 2.60 (66).

Recognition Marks.—Gull size; dark slaty blue of mantle distinctive, adolescent black spot on angle of gonys less persistent than in other species; wing-pattern simpler than in many but not affording good field mark.

Nesting.—*Nest* and *Eggs* quite as in preceding.

General Range.—Pacific Coast of North America, breeding from British Columbia (west coast of Vancouver Island) south to Lower California.

Range in Washington.—Not common spring and fall migrant only on Puget Sound, more common during migrations on the Straits; nests only in the southern portion of the Olympiades, chiefly within the Copalis Rock Reservation.

Authorities.—? Audubon, Orn. Biog. V. 1839, p. 320. **Baird and Lawrence**, Rep. Pac. R. R. Surv. IX. 1858, p. 845. C&S. I.¹. Rh. D¹(?). Kb. Kk. B. E.

Specimens.—Prov.

JOHN FANNIN, while curator of the Provincial Museum at Victoria, regarded the Western Gull as a resident of British Columbia, and called it "very abundant on the Coast during the winter months." He found it breeding in the Similkameen Valley, and supposed that it nested also upon the coast. This surmise must have been correct, for the birds do appear about our northern harbors in considerable numbers, and they are especially noticeable along the Straits of Juan de Fuca in spring time; but it is worthy of remark that they have yielded all title in the San Juan Islands to the Glaucous-

wings (*L. glaucescens*), and that they occupy mainly the southern members of the Olympiades during the nesting season.

Willoughby Rock, off Cape Elizabeth, is the northernmost colony of unmixed *occidentalis* on the Washington Coast; but scattered pairs occur, along with Glaucous-wings, as far up as Carroll Islet. Upon Carroll, and also upon Wishaloolth, a constant percentage of Westerns may be found among the large numbers of Glaucous-wings, with whom they *appear* to intergrade, or hybridize. Certain it is, at least, that from a vantage point of observation, as upon the comb of Wishaloolth, 175 feet above tide, one may see unmistakable Westerns, with black wing-tips, passing and repassing below. Between such clear-cut examples and Glaucous-wings, every grada-



Taken at Port Williams.

Photo by the Author.

RIDING AT ANCHOR.

tion appears to exist, altho typical *glaucescens* outnumber all others ten to one.

Nesting is undertaken in May, and by the 20th of that month, or by June 10th at the latest, the complement of three eggs is laid. Nests are composed almost exclusively of dried grasses plucked by the birds, roots and all; and these become quite substantial structures if the grass is convenient. Ledges, crannies, grassy hillsides, and the exposed summits of the rocks, are alike utilized for nesting sites; while occasionally a bird ventures down so close to the tide line as to lose her eggs in time of storm. Chicks are brought off by the third week in June, or by the first of July, according to season, if unmolested. If the first set is removed, however, the birds will prepare a second, consisting almost invariably of two eggs, and these are deposited as likely as not in the same nest as the former set. Deposition occurs at intervals of two or three days.

Split Rock, a bleak islet off Cape Elizabeth, is occupied by a colony of these Western Gulls. When I visited it on the Twelfth day of July, 1906, young birds, from infants to those half grown, were in hiding everywhere. The danger sign had, of course, been passed around, and not a youngster on the island but froze in his tracks, no matter where he happened to be. It was pathetic to find, as I did now and then, babes soaking heroically in the filthy green pools left in hollows of the rock by ancient rains, rather than attract attention by scrambling out. One youngster had evidently been nibbling playfully at a bit of driftwood cast high up, for I found him with the stick between his mandibles, as motionless as a Pompeian mummy.

In some instances, if the chick knew himself discovered, he felt free to shift his position with a view to betterment. But instinct did not serve a whit to guide the chicks in such efforts, and they



Taken at Split Rock.

Photo by the Author.

YOUNG WESTERN GULL.

were as likely to topple off a precipice as to find a safer haven.

A company of some hundred adults, fathers perhaps, lay offshore and watched proceedings; but the mothers gave me earnest attention. Three times I was struck upon the head, always from behind, by vicious beaks, while I was engaged in the benevolent task of gathering up babies for a picture. A plague upon this photography of infants anyway! It is appreciated neither by parent nor child. A gull-let in the bush is marble, but only his rump is visible; while a chick in the hand is the squirmiest product of nature. No, sir, he will not keep still, nor stay put for the pitiful fraction of a second. Ergo, the gallery of darlings is still incomplete.

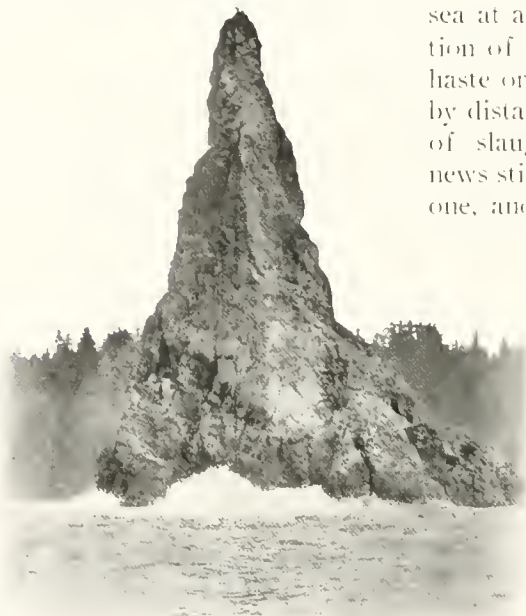
Gulls are indiscriminate feeders, and all is grist which comes to their mill. This species is charged with a discreditable weakness for birds' eggs; and according to Finley and others, an adult Western makes nothing of swallowing a young Murre or a squab Cormorant in the absence of vigilant parents. This stigma, by the way, does not attach to Glaucous-winged Gulls, for I have spent weeks with them without witnessing any misbehavior.

Fish constitute the staple diet of the gulls, and the birds quarter the sea at a considerable height until some indication of a travelling school is noted. Tell-tale haste on the part of any one bird is remarked by distant comrades, and all hurry to the scene of slaughter. Excited screams publish the news still more widely, if the prospect is a good one, and a thousand birds may join the feast before the bewildered fish realize that they are furnishing both mirth and meat, and go below.

The Indians take proper advantage of this fish-finding propensity on the part of the gulls, and when the birds follow the smelt ashore at La Push, a shout runs thru the village, and the seines are hurried out.

When the birds are surfeited, according to Mr. Bowles, a game of tag is indulged in. One catches a herring, and instead of eating it, flies with the fish hanging from its bill, past three or four comrades. These accept the challenge,

and rush madly after, while the pursued goes thru all sorts of evolutions in seeking to elude them. If overtaken, the order of chase is reversed, and the game goes merrily on until all are tired. The fish, or tag trophy, is not eaten, but is dropped upon the play-ground in a condition decidedly the worse for wear.



Giants' Graveyard Group.

Photo by the Author.

ANAK'S HEADSTONE.
A WESTERN GULL ON THE SUMMIT.

No. 292.

HERRING GULL.

A. O. U. No. 51. *Larus argentatus* Pontoppidan.

Description.—*Adult in summer:* Mantle deep pearl-gray; primaries extensively blackish, the first quill white basally on inner web, and with a large, rounded, subterminal white spot on inner web, and narrowly tipped, or not, with white; the basal white of succeeding quills gradually encroaching on the black, but always more extensive on the inner web until the seventh quill is reached, in which the black is nearly obsolete; the second to sixth quills tipped with white; remaining plumage entirely white; bill bright chrome with vermilion spot near angle, and sometimes black traces; feet and legs purplish flesh-color. *Adult in winter:* Similar but head and neck streaked with brownish gray; bill duller. *Immature:* Brownish gray, nearly uniform, or finely mottled with grayish white below; streaked with the same on head and neck; upperparts irregularly varied,—brownish gray of two shades with dull white and grayish buff; wing-quills and tail brownish dusky, the former unmarked, the latter mottled laterally with dull buffy or whitish; bill blackish, paling basally. Between this and the adult in high plumage every gradation appears. Length 22.00-26.00 (558.8-660.4); av. of nine specimens: wing 17.60 (447); tail 6.72 (170.7); bill 2.14 (54.4); tarsus 2.68 (68.1).

Recognition Marks.—Brant size; mantle rather light bluish gray; *black* wing-tips (with white spots on adult) serve to distinguish from *L. glaucescens*; rosy feet from *L. californicus* (this is the sole *certain* distinction a-wing) and *delawarensis*; more extensive black on wing-tip and lighter mantle from *occidentalis*, and lighter mantle from *vegæ*.

Nesting.—Does not breed in Washington. *Nest:* as in preceding. *Eggs:* indistinguishable. Av. size, 2.85 x 2.00 (72.4 x 50.8).

General Range.—The northern portion of the northern hemisphere; in North America breeding from Maine, northern New York, the Great Lakes, Minnesota, and British Columbia northward; south in winter to Cuba and Lower California.

Range in Washington.—Common spring and fall migrant on Puget Sound; sparingly resident in winter, chiefly northerly (Bellingham, San Juan Islands, etc.).

Authorities.—Rhoads, Auk, Vol. X. Jan. 1893, p. 17. Rh. Kk. E.

Specimens.—Prov. BN. E.

"CAPTAIN, how many kinds of gulls do you see here in the course of a year?" "Gulls? Kinds of gulls?" repeats the man in the pilot-house, the man who knows buoys, harbor lights and all proper things of seamanship like a book. "Why, there isn't more than one kind, is there? Well, yes; mebbe they's two kinds, the dark ones and the white ones; or mebbe they's big and little ones." This, of faithful attendants after twenty years service at sea!

We know, of course, that there are eleven kinds of gulls in Washington, besides their blood relatives, the Jaegers and Terns, of which there are two and four species, respectively. The captain might have been sooner pardoned if he had answered "Forty!"; for when to the subtle but shifting variety of adult marking is added the interminable shading of childhood and youth, you have a scene of confusion worse confounded, in which not even the expert is at home. But let us see if a little light is possible: The dingy, mottled, or blackish gulls are (with one exception) young birds of the first



Taken in Seattle.

From a Photograph, Copyright, 1908, by W. L. Dawson.

A GULL MELANGE.

and second years. Save in the case of Heermann's Gull (*L. heermanni*) all adult gulls are chiefly white, with the upper surfaces of back and wings—the mantle—chiefly blue-gray (pearly gray, ashy gray, or plumbeous); while, also with one exception, the tips of the wings, or primaries, are black, variously spotted and blotched (or not) with white. All birds which show mixed characters, such as black tail and wing-quills with mottled plumage, etc., are juveniles of the second or third year.

The most persistent juvenile characteristic in the case of the common

larger gulls, (*Larus glaucescens*, *occidentalis*, *argentatus*, *californicus*, *delawarensis*, and *brachyrhynchus*) is a gradually diminishing area of black upon the beak (altho this in its reduced form is an adult characteristic of *L. californicus* and *L. delawarensis*). With advancing age gulls tend to become lighter in coloration; and in extreme examples (as in the case of certain Western Gulls observed at Split Rock) the black wing-tips bleach nearly to whiteness, altho the characteristic pattern may still be dimly discerned.

Size is also a very variable characteristic in the larger gulls, and it is impossible to distinguish *Larus argentatus* from *glaucescens* on the one hand, or *californicus* on the other, from the standpoint of size alone.

The Herring Gull begins to return from its northern breeding grounds as early as the middle of August. By the 20th of that month large numbers of this species gather with congenial spirits upon the tide-flats and sand-bars of Blaine, where they gorge themselves upon the waste salmon and offal which abounds at that season. The eyes of a salmon are considered great delicacies by these birds; but their taste does not halt here, and their presence in thousands does much to render tolerable the vicinity of a salmon cannery.

While in general it may be said that Herring Gulls are common in winter on Puget Sound, they appear to hold by preference to the more northern ports, such as Bellingham; and their presence depends largely upon the season,—the milder the season the fewer the birds. A storm or a cold snap as late as January will bring thousands of gulls of this and allied species hurrying down from the North, and may altogether change the complexion of the local gull fauna.

No. 293.

VEGA GULL.

A. O. U. No. 52. *Larus vegæ* (Palmén).

Description.—Similar to *L. argentatus*, but mantle darker, ashy gray to plumbeous gray. No other differences alleged.

General Range.—"Bering Sea and adjacent waters south in winter to California and Japan" (A. O. U.).

Range in Washington.—Casual in winter on Puget Sound.

Authorities.—Dawson, Auk, Vol. XXV, Oct. 1908, p. 484. E(H).

DOCTORS of Ornithology are still gravely disputing the scientific existence of this bird; but we can point them at any time in winter to examples in Bellingham harbor, which have very much darker mantles than do ordinary Herring Gulls. It is fair enough to presume that this dark-togaed race

occupies some definitely circumscribed region in the far North, conjectured to be the shores of Bering Sea, and that ages of loyalty to the scenes of childhood have bestowed this distinctive mark upon it.

One of these dark-winged birds which used to rest on the top of a certain convenient pile, in Bellingham, had a foot taken off, as if by a sharp-edged trap. The bird, however, supported himself freely upon the tarsal stump, and apparently made light of his infirmity. Old "Dot-and-go-one" had also an unusually conspicuous spot of vermilion, which glowed becomingly, upon the angle of the lower mandible.

No. 294.

CALIFORNIA GULL.

A. O. U. No. 53. *Larus californicus* Lawr.

Description.—*Adult*: Mantle pearl gray (averaging a little darker than in *argentatus*); tip of wing (six outer primaries) chiefly black, that of 1st primary interrupted near tip by blotch of white about two inches in length, shaft of feather white in this portion, area of white decreasing on inner web; 2nd primary less extensively blotched with white, forming in the exposed wing with the preceding a wedge-shaped area of white, largest anteriorly, shaft of this quill black thruout; tips of all white; black disappearing in small subterminal bar of 6th; remaining plumage pure white (streaked, or not, with dusky on hind-head and neck in winter); bill yellow (brighter in summer), a round spot of vermilion, above which a round spot of black, on lower mandible at angle; irides brown; feet greenish gray or yellowish gray. *Nearly mature*: As in adult, but lingering traces of brownish gray on upperparts, tail with narrow, imperfectly defined subterminal bar of black; white subterminal area on 1st primary reduced; none on 2nd. *Young*: Upperparts more or less mottled with dusky or brownish gray; primaries and rectrices brownish black paling slightly on tips; bill black on terminal half. Length of adult 20.00-23.00 (508-584.2); wing 15.00-17.00 (381-431.8); bill 1.65-2.15 (41.9-54.0), depth at angle .60-.75 (15.2-19.1); tarsus 2.40 (61).

Recognition Marks.—Small Gull size; *feet greenish gray* (serving to distinguish from all but *delawarensis*, which is more extensively black on wing-tip with banded bill, and *brachyrhynchus*, which is smaller with relatively smaller beak); large wedge-shaped spot of white near tip of wing; otherwise much like *argentatus*, which it closely approaches in size.

Nesting.—Not known to breed in Washington. *Nests*: on ground in colonies in inland marshes. *Eggs*: 3, colored as in other forms. Av. size, 2.60 x 1.80 (66 x 45.7).

General Range.—Western and Arctic North America breeding chiefly in the interior from northern California and Utah northward; south in winter to Lower California and Mexico.

Range in Washington.—Common spring and fall migrant, chiefly in April and November, on Puget Sound; casual in winter.

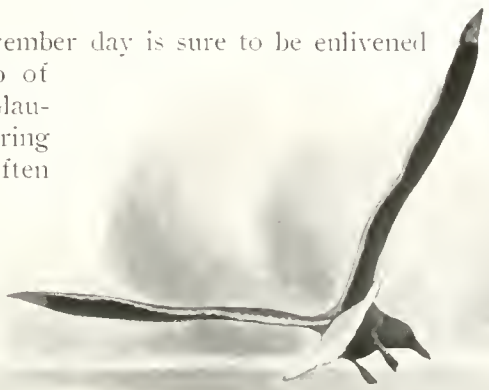
Authorities.—Baird and Lawrence, Rep. Pac. R. R. Surv. IX. 1858, p. 846. C&S. Rh. B. E.

Specimens.—B.

IMMENSE numbers of these birds pass thru our borders in April and again in October. In the spring they are not long detained by the attractions of the water front and garbage dump, being intent on home building in the interior marshes of British Columbia, but in the fall their progress southward is more leisurely, and some accept winter quarters on the shores of Puget Sound.

A steamboat ride on a raw November day is sure to be enlivened by the sight of an attendant group of gulls, Californias, Herrings, and Glaucous-wings. They play pilot, hovering angel, and passenger by turns; and often for the sheer humor of the thing, trail doggedly behind, as tho flying, forsooth, were hard work.

The gulls take a lively interest in the passengers, but it is the cook who has the key to the gull heart. It is for his sake alone that the birds have forsworn the sunny beaches of California and attached themselves to the caravels of commerce.



From a Photograph, Copyright, 1907, by W. L. Dawson.

"OLD WINDMILL."

CALIFORNIA GULL OFF JACKSON STREET WHARF, SEATTLE.

"He may live without love—what is passion but pining?

But where is the *gull* that can live without dining?"

If you would cultivate gull society fee the galley for a loaf of bread and smuggle it up surreptitiously to the hurricane deck, well aft. Now for some fun! The hungry horde weaves to and fro, forward and back, up and down and around, mewling expectantly like a litter of kittens at milking time. Hold up a piece of bread and the pace becomes furious. "Please, please, please," they cry, until their mandibles fairly quiver with eagerness. But none snatches it from your hand; they are too well disciplined in the treacherous ways of men for that. When at last the bit is flung—

instant silence. Every gray bolt is launched at the falling bread and the water where it must pause. Crash! And the clamor bursts out afresh, for the luckless many must voice their disappointment while the lucky one gulps down the prize and hurries back for more.

Gulls do not ordinarily dive, for they are light as corks. They snatch their food rather from the surface of the water. If there is plenty, as when the cook dumps the accumulated leavings from the captain's table, the gulls settle gracefully upon the water and throw the morsels down by rapidly succeeding jets of the head.

The more experienced birds learn to catch bread on the wing, and the disclosure of such ability guarantees its owner a full meal. It is no small trick to catch a bit of flying bread in the teeth of the wind, for it is sometimes a nice fraction of a second between the bestowing hand and the bird's beak.

Long before the bread gives out you have been seized afresh with wonder at the mystery of that gliding flight. Graceful, effortless, untiring, but above all mysterious, is that power of propulsion by which the bird moves forward into the teeth of the gale,—indeed, is advanced all the more certainly and freely when the wind is strong. From the deck of a steamer making fifteen miles an hour against a fifteen knot breeze, I once stretched my hand toward a soaring gull. He lay suspended in midair without the flutter of a feather, while the air rushed past him at the rate of thirty miles an hour; and he maintained the same relative position to my hand, at five or six feet, for about a minute. When he tired of the game, he shot forward. And again, there was not in the motion the slightest perceptible effort of propulsion, but only a slightly sharper inclination of the body and wings downward. We see clearly how it must be; yet we cannot understand it. The gull is a kite and gravity the string. The bird is a continually falling body, and the wind is continually preventing the catastrophe. Yes, we see it—but then, gravity *isn't* a string,



Taken in Seattle.

From a Photograph, Copyright, 1907, by H. L. Dawson.

SUCCESS.

CALIFORNIA GULL SNATCHING BREAD FROM WATER.

you know; and so why doesn't the wind take the kite along with it? Well, there you are; and not even Hamilton, who discovered quaternions, could have given the mathematics of it. The Bluebird and Phoebe *are* smarter than we be, and we'd give a cool billion to get the receipt.

Forward and back, to and fro, and around—why, Hello! There's a bird without any feet. Won't he have a hard time of it tho! And now—why, there's another! Not a vestige! The immaculate feathers close over the footless stumps and betray no sign of their presence. The wind is searching, and Mr. Gull, who does not approve of chilblains, kicks his yellow feet one at a time under the white blanket of feathers provided by the under tail-coverts, and proceeds footless upon the mazy journey. What's the use of feet anyway when you have wings?

On the voyage feet are useful only as the birds take turns at the mast head, pausing for a moment with wings gracefully outstretched until they have mastered the motion of the boat. These stations on mast and flag-staff are jealously coveted, and the gull that would hold one must be vigilant in defense, or at least ready to bluff the aspirant with a mighty scowl. Otherwise a quick dab from behind will upset the dignified Burgomaster, balance, dignity, and all. But who may comprehend by epithet or episode the unflagging charm of the white-winged fleet,—now in the van leading away with brave impudence, now registering a retreat with far-flung shadows on the smoke-stack, now trailing laboriously in the wake like faithful hounds in leash. What humility of supplication! What perfect independence! What condescension of grace! What boundless exultation of wings *wings, wings!* Oh, who would not give hands and feet for wings!



Taken in Seattle.

From a Photograph, Copyright, 1908, by W. L. Dawson.

TO ARMS!

CALIFORNIA GULLS QUITTING THE TIDE-FLATS.

No. 295.

RING-BILLED GULL.

A. O. U. No. 54. *Larus delawarensis* Ord.

Description.—*Adult in summer:* Mantle deep pearl-gray (typical "Gull-blue," much as in *L. argentatus*); primaries mostly black, the color decreasing in extent inwardly, and disappearing with the sixth quill, owing to encroachment of basal white (or pearl-gray); the first quill with subterminal white spot, the third to sixth tipped with white (that of the third to fifth often lacking in worn plumages); remaining plumage white; bill greenish yellow, crossed at angle by a broad and clearly defined black band; feet light yellow or greenish; eyelids vermillion; iris pale yellow. *Adult in winter:* Similar, but head and hind-neck streaked with dusky gray. *Young:* Above, brownish dusky or fuscous, edged and varied by whitish and grayish buff; outer primaries plain blackish, the shorter ones extensively bluish gray, and tipped with white; tail light bluish gray more or less mottled with blackish; crossed by a broad subterminal black band and tipped with white; below white, the sides spotted with brownish gray; bill blackish, paling basally. Length 18.00-20.00 (457.2-508); wing 14.50 (368.3); tail 6.00 (152.4); bill 1.60 (40.6); tarsus 2.20 (55.9).

Recognition Marks.—Crow size, but appearing larger; mantle "gull-blue"; black band across bill at angle; extensive black (with little show of white spotting) of primaries distinctive; feet greenish yellow (thereby easily distinguishable from all others, save *L. californicus* and *L. brachyrhynchus*).

Nesting.—Not certainly known to breed in Washington. Nest on the ground, of broken down reeds and grasses, or on summit of musk-rat houses, old Grebe nests, and the like; *Eggs:* 2 or 3, colored as in other species. Av. size, 2.40 x 1.70 (61 x 43). *Season:* June; one brood.

General Range.—North America at large, less common on Pacific Coast; breeding chiefly in the interior from northern tier of states northward; south in winter to Cuba and Mexico.

Range in Washington.—Not common spring and fall migrant on Puget Sound; summers casually on the East-side, where it possibly breeds; after *L. vegae* easily the least known locally of the genus *Larus*.

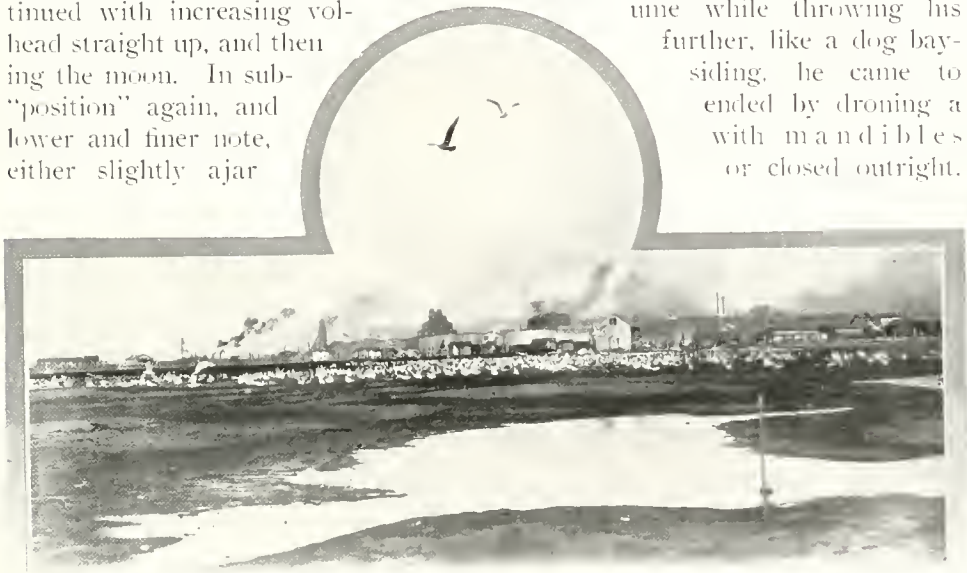
Authorities.—Baird (**Lawrence**), Rep. Pac. R. R. Surv. IX, 1858, p. 847. T. C&S. Rh. Kk. E.

Specimens.—Prov.

NO two observers will agree precisely upon the relative abundance of birds in a given region; and this diversity of experience, or judgment, or both, appears to pertain especially to the gulls. In our experience the Ring-billed Gull is not only not "common" on Puget Sound, but its occurrence is irregular and worthy of remark. By comparison with other species in winter plumage, the Ring-bill presents in its banded beak, its heavily spotted neck, and its primaries without conspicuous white, a subtle recrudescence of common juvenile characters, which enable it to elude observation when involved with mixed companies of many sorts.

Going north along the beach road from Blaine, as the tide neared the flood, I caught sight of a newly-arrived company of these Gulls upon an outer reef. Noting a bar midway between them and the beach, to which they would be likely to retire if not alarmed, I stole up to a sheltered spot commanding a view of the latter location. Here at close range I had the satisfaction of seeing the birds alight gracefully one by one until a company of twenty-six awaited the last advances of the tide. One member of the flock had his suspicions of the dark object ashore, and published them from time to time in a high-pitched note of protest. In uttering this the bird first thrust his head forward with mandibles far apart, and began squealing. This noise he continued with increasing volume while throwing his head straight up, and then ing the moon. In sub-
"position" again, and lower and finer note, either slightly ajar

further, like a dog baysiding, he came to ended by droning a with mandibles or closed outright.



From a Photograph, Copyright, 1907, by W. L. Dawson.

THE MESSENGERS OF PEACE.
GULLS ON MADE LANDS, SEATTLE.

Without further retreat the flock awaited quietly the oncoming of the tide, and allowed it to lift them, like stranded boats, clear of their anchorage, after which they swam slowly out to sea.

We encountered these birds in small numbers about Moses Lake in May, 1906, and surmised that they were breeding in some out-of-the-way swamp among the sand-hills. They were in high plumage, and their notes at this season had a mellowness and depth entirely strange.

It is no small satisfaction to note that the barbarous custom of adorning ladies' hats with the purloined plumage of these graceful gulls has about disappeared. To be sure, they did look very jaunty, but the hasty effigy of

innocence which the milliner's art prepared, was still too eloquent of mercenary betrayal and slaughter to let my lady's face speak its own message of innocence and beauty. It will take long years yet for the devastated vales and island fastnesses to recover, if they can, from the thoughtless requisition of a woman's fancy.

No. 296.

SHORT-BILLED GULL.

A. O. U. No. 55. *Larus brachyrhynchus* Rich.

Synonym.—AMERICAN MEW GULL.

Description.—*Adults in summer:* Mantle pearl gray; remaining plumage, except quills, white; primaries chiefly black terminally in decreasing ratio from the 1st to the 7th, all but the 1st white-tipped; 1st with large subterminal blotch of white some 2.00 long, longer on outer web, pierced but not divided by black of shaft; 2nd with subterminal area of white plainly separated into spots by black of shaft, and with a wedge of gray on inner web; 3rd without corresponding spot but with large white space on inner web between the subterminal black and the basal gray; bill greenish yellow, brightening (more yellow) on tip; feet and legs dull bluish green, webs yellow. In highest nuptial plumage the eyelids, edges of gape, and the tomtia become bright orange-yellow; the bill hoary glaucouscent on basal portion; the feet a brighter bluish green, the webs bright yellow; and a faint rosy flush sometimes appears on feathers of underparts. *Adults in winter:* Duller; the head and neck all around, with chest, more or less mottled with dusky. *Young of the year:* Head and neck, rump, and underparts, grayish brown, mottled with dusky; back pearl-gray with duller edgings; wing-coverts and inner secondaries dusky with lighter edgings; primaries nearly uniform brownish black thruout; tail pale gray, mottled with dusky basally, brownish black distally, narrowly tipped with whitish; bill flesh-colored basally, blackening terminally; feet and legs light yellow. *Approaching maturity:* Primaries still brownish black without white tips, but with indications of subterminal white spots; tail with blackish subterminal band. Length of adult: 16.50-18.00 (419.1-457.2); wing 14.00 (355.6); bill 1.45 (36.8); depth of bill at angle .45 (11.4); tarsus 1.95 (49.5).

Recognition Marks.—Crow size; small weak bill; feet greenish yellow. Requires careful discrimination from possible Mew Gull—*L. canus* (H) q. v.

Nesting.—Does not breed in Washington. *Nest:* on ground near marsh, of moss, etc. *Eggs:* 2 or 3, colored as in other species. Av. size, 2.28 x 1.58 (57.9 x 40.1).

General Range.—Breeding in Arctic and subarctic America, chiefly in the interior; wintering from southern Alaska to southern California.

Range in Washington.—Abundant migrant in late fall and early spring on Puget Sound; of variable abundance in winter.

Authorities.—*L. suckleyi*, Lawr., **Lawrence**, Ann. Lyc. N. H. N. Y. VI. 1858, 264. *Rissa septentrionalis*, Lawrence, Ann. Lyc. N. H. N. Y. VI. 1858, 265 [*Auct.* C. W. Richmond]. *Larus brachyrhynchus*, Chapman, Bull. Am. Mus. N. H. III. 129, 155. (T). C&S. Rh. Kk. B. E.

Specimens.—(U. of W.) Prov. B. E.

A CERTAIN childish innocence and simplicity appears to distinguish these birds from the more sophisticated Herrings and Glaucous-wings. They are the small fry of the great gull companies which throng our borders in winter, allowed to share, indeed, when Petro dumps a rich load of restaurant waste, but expected to take a grumbling back seat when the supply of food is more limited. One may see at a glance that they are not fitted for competition. Their bills are not only shorter, but much more delicately proportioned than those of the other gulls; while their gabbling, duck-like notes oppose a mild alto to the screams and high trumpetings of their larger congeners.

Gulls of this and allied species are quick to appreciate the advantages of protected areas. Along the water front, or near steamers, where shooting would not be allowed, they become very bold. Short-bills, however, do not stand about on palings, piles, and roofs, as do the Glaucous-wings, but rest, instead, almost exclusively on the water. Thus, if one attempts to bait the gulls with an offering of bread laid on the wharf-rail, the larger gulls will begin to line the neighboring rails and posts, craning their necks hungrily, or snatching exposed fragments; but the Short-bills will settle upon the water and draw near to the piling below, content to catch such crumbs as fall from the high-set table.

Away from the city the gulls become increasingly wary, for no other reason than that sneaks with guns will do what the law forbids, as often as they think themselves safe from observation. Once a gull is killed or wounded, its companions hover about it with piteous cries, momentarily forgetful of their own danger, or indifferent to it, as they urge their fallen comrade to escape. This sympathetic trait is, of course, taken advantage of by the Fourth-of-July sportsman (?) whose only requirements are noise and something to shoot at.



Photo by the Author.

"HOVERING DOVES."

SHORT-BILLED GULLS OFF JACKSON STREET
WHARF, SEATTLE.

The Short-billed Gull returns to Alaska in May, at which season, according to Mr. Nelson, its soft white plumage is shaded with a delicate rose color. "It is a marsh-loving species, and is rarely found near the bold



Taken in Seattle.

Photo by the Author.

SHORT-BILLED GULLS

promontories and capes which delight the Kittiwakes. Frequenting all the flat marshy country of the coast and interior, they are found nesting from the peninsula of Alaska north to the head of Kotzebue Sound, and from this sea-coast region they breed interiorly over Alaska and northern British America."

No. 297.

HEERMANN'S GULL.

A. O. U. No. 57. *Larus heermanni* Cass.

Synonym.—WHITE-HEADED GULL.

Description.—*Adult in breeding plumage:* Bill vermillion thruout, or else blackening on tip; eyelids red; head and neck all around pure white; remaining upperparts plumbeous slate, lightening on rump, changing to ashy on upper tail-coverts; primaries black, all but the two or three outermost narrowly tipped with white; underparts deep ashy-gray; feet and legs reddish black. *Adult in winter:* Head color of back or darker. *Young of the year:* Entire plumage sooty black, more or less edged with grayish white, especially on back and wings; tail tipped with white, but white tips of flight-feathers more or less obsolete; bill and feet brownish black. *Immature:* Head and neck mottled brownish-dusky and white, clearing on forehead and throat; terminal white of tail broader; bill as in adult. Length of adult: 17.50-21.00 (44.5-53.3-4); wing 13.50 (34.2-9); bill 1.75 (44.5), depth of angle .55 (14); tarsus 2.20 (55.9).

Recognition Marks.—Crow size; dark body plumage unmistakable in any feather.

Nesting.—Does not breed in Washington. *Nest* and *Eggs* imperfectly known.

General Range.—Pacific Coast of North America from Panama to British Columbia, breeding in southern portion of range in early spring, and summering to northern limit of range.

Range in Washington.—Summer visitors chiefly on the waters of Washington Sound and the Straits of Juan de Fuca; migrant in early summer and early fall along the West Coast; casual on Admiralty Inlet—an example of reverse migration. Casual in winter.

Authorities.—*Blasippus heermanni*, Bon., **Baird and Lawrence**, Rep. Pac. R. R. Surv. IX. 1858, p. 849. C&S. B. E.

Specimens.—(U. of W.) Prov. B. E.

NO passenger on one of the steamers plying the waters of "the Straits" in midsummer can fail to notice the dark-bodied gulls which hover in the



Taken in California.

Photo by W. L. Finley.

HEERMANN GULLS, ADULTS AND IMMATURE.

offing or ride about upon pieces of mill waste. These White-headed Gulls pay not the slightest attention to the passing steamer: but they do hugely enjoy

their own primitive crafts, and so devoted are they to the sport of log-driving that you would think it must afford them a means of livelihood. If the log is large enough a dozen birds will stand in line drifting, drifting,—whither, no one knows nor cares.

The fact is, Heermann's Gull is an inveterate loafer and sycophant, a professional idler. Of southern blood (we have just learned that he is bred on islands off the coast of Mexico) he comes north in June only to float and loaf and dream thruout the remainder of the season. Visit the "Bird Rocks" of Rosario Straits early in July, and you will find a colony of Glaucous-wings distraught with family cares and wheeling to and fro in wild concern at your presence, while upon a rocky knob at one side, a white-washed club room, sit half a thousand Heermanns, impassive, haughty, silent. If you press inquiry they suddenly take to wing and fill the air with low-pitched mellow cries of strange quality and sweetness, as they make off to some distant rendezvous. And go where you will, at what season, the Heermann Gull is guiltless of local attachments—in the North.

While occasionally seen during migrations in the passage of the upper Sound, this bird avoids the tide-flats and harbors, keeping to the more open water, or else feeding and resting among the kelp beds. It is fond of the smaller fish, and earns its rests by agility here. As Anthony says: "When herring are swimming in compact schools near the surface both Heermann's and Western Gulls secure them by approaching the school from behind and flying near the surface of the water, making repeated quick dips into the school. The fish seek safety in the depths the instant anything occurs to alarm them, but soon return to the surface, so that the gulls by stalking them from the rear are enabled to approach quite near before the fish are alarmed. As soon as the limits of the school have been passed, the gull, rising higher in the air, returns by a wide circuit and again passes over the school from the rear. As the fish all swim in one direction, in a compact mass, these tactics afford the gulls a decided advantage which seems to be thoroly understood."

While these birds abound in the lower Sound region, it is significant that we saw none in passing from Neah Bay to Destruction Island in June, 1907, and saw them only once upon that coast in the cruise of 1906: viz., at Split Rock on July 9th. Of their leisurely return in the fall, Cooper wrote: "Early in September large flocks of this gull begin to enter Shoalwater bay with the terns and pelicans. They remain about two months before retiring southward, fishing for the herrings which come at that season. Tho quite rapid in flight, and well able to supply themselves with food, they have a curious habit of "sponging" on the pelicans and large gulls. Often a long train of pelicans is seen, as the tide is rising, slowly wandering round the bay, each one attended by one or more of these gulls which are usually some distance behind. Whenever a pelican awkwardly plunges into the water and emerges with its enor-

mous scoop net full of fish, its parasites are sure to be ready and fearlessly seize the fish from its very jaws, the stupid bird never resenting the insult, or appearing to take the least notice of the little pilferer which it could easily rid itself of by one blow, or even swallow alive.

No. 298.

BONAPARTE'S GULL.

A. O. U. No. 60. *Larus philadelphia* (Ord.).

Synonym.—SEA PIGEON.

Description.—*Adult in summer:* Head including throat blackish slate, mantle pearl-gray; primaries extensively white, the first six with black terminal portions, the third to sixth, in addition, narrowly tipped with white; the first quill with outer web and tip black, the second and third altogether white with black tips, the fourth white on outer web, pearl-gray on inner web, with touch of white at extremity of terminal black, effecting the transition to the nearly uniform basal pearl-gray of inner primaries; remaining plumage pure white, the underparts more or less flushed with pale rosy; bill jet black; feet and legs rich orange-red; feathering of eyelids white posteriorly, the skin carmine. *Adult in winter:* Without the black hood; a dab of slate behind the ear and another before the eye, with a plumbeous suffusion of occiput instead; rosy tint of underparts wanting; bill lighter basally, and feet pale flesh-color. *Immature:* Like adult in winter, but plumbeous suffusion of hind-head more extensive and tinged with brownish; the pearl-gray of mantle less distinct and varied by brownish gray; lesser wing-coverts and inner tertials mostly brownish gray; primaries mostly blackish on exposed outer webs, where the adult is white, and white on outer webs of inner primaries, where adult is pearl-gray; the inner primaries narrowly tipped with white as before; tail crossed terminally, or nearly so, with a broad band of blackish or brownish dusky; bill still lighter, but blackish toward tip. Length 12.00-14.00 (304.8-355.6); av. of six specimens: wing 10.30 (261.6); tail 3.60 (91.4); bill 1.12 (28.5); tarsus 1.41 (35.8).

Recognition Marks.—Little Hawk size; smallest of the local Gulls; size of Common Tern (*Sterna hirundo*); head black, in breeding plumage; bill black or mostly black; mantle gull-blue; primaries mostly white and gull-blue, tipped with black, and very narrowly with white. To be told at a glance from the Terns by its shorter, squarish tail, and in breeding plumage, by head being blackish *all around*.

Nesting.—Does not breed in Washington. *Nest:* of sticks lined with grass, etc., placed four to twenty feet high in bushes, trees, or on stumps. *Eggs:* 3, rarely 4, greenish olive or brown, with smallish spots or blotches of umber and lilac, chiefly about larger end. Av. size, 1.95 x 1.35 (49.5 x 34.3).

General Range.—Whole of North America, breeding mostly north of the United States. Not yet recorded from south of the United States, tho reported from the Bermudas.

Range in Washington.—Abundant coastwise during migrations; returns to Semiahmoo Bay in large numbers about August 20; sparingly resident in winter.

Authorities.—*Chroicocephalus philadelphia* Lawr., **Lawrence**, Rep. Pac. R. R. Surv. IX, 1858, p. 853. C&S, L. Rh. [D.] Kk. B. E.

Specimens.—(U. of W.) Prov. B. E.

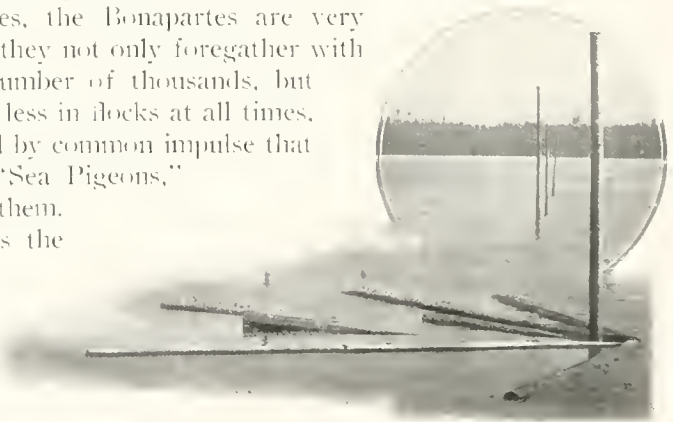
A MORE peaceful scene could scarcely be conjured up by the imagination than that of a company of Bonaparte Gulls resting at high tide. Some sixty of them sit before me now on a miniature boom of radiating logs, and I am spying on them from the shelter of a deserted cannery. The windward logs break the force of the tiny waves which are running before a gentle breeze, and provide an oasis of calm. In this glassy space a few birds, mostly late comers, are bathing and otherwise disporting themselves; but most of the company sit placidly upon the logs in dainty rows, or doze with head tucked under wing. A few Terns, hardly distinguishable at this distance from their square-tailed kinsmen, are allowed to share this haven of refuge, and no distinctions of courtesy are made. Now and then there is a little jostling, as some newcomer, fresh from his bath, demands admission to the ranks, and a squabble in low-pitched tones, not unlike the grunting of little pigs, ensues; but the difficulty is soon adjusted and peace reigns supreme.

Like most pygmies, the Bonapartes are very sociable creatures, and they not only foregather with their fellows to the number of thousands, but they associate more or less in flocks at all times, and are so often moved by common impulse that they merit the name "Sea Pigeons,"

frequently applied to them.

In spring Bonaparte is the very devil of a fellow, and would be set down at sight as a lady-killer, were it not for the fact that his good wife, present or prospective, is similarly attired. You see, by

way of preparation for nuptials, this bird thrusts its head half-way into a pot of black paint. And because the paint is very black (Oh, well, "plumbeous slate," then; but that is black enough, surely) he shuts his eyes *very* tight and saves a space above and below untouched by the pigment. And then he, or she, bears upon the breast at this season a rosy blush, which alone would be enough to proclaim the nearness of mating time.



Taken at Blaine. Photo by the Author.

"PEACE REIGNS SUPREME."



Taken at Blaine.

BONAPARTE GULLS ON TIDE-FLATS

Photo by the Author

When the Bonapartes return, however, reaching, as they do, our northern borders late in July, they are doffing their black head gear, and they soon look as babyish and innocent as ever.

Birds of this species have no liking for the steerage fare afforded by the cities, but they gather extensively upon the tide-flats, where they pursue marine worms and tiny crustaceans. They are not less fond of kelp beds or open water, and they have an especial liking for tide channels, where there is great bustle of fishy traffic, and where a fellow can catch a ride now and then on a floating soap-box—outbound or inbound, it matters not.

Now a brother sights a school of herring and sets up a joyful yelp. Instantly every "pigeon" within hearing joins him, and scores come hurrying up from unseen distances, till the water is white with them. The discreet fishlets have gone below, and the gulls are left to spin about on the surface looking foolish, or to gabble amicably with their similarly duped neighbors. After all nothing matters in good society.

Suckley noted these gulls as common about the mouth of the Nisqually River, and presumed that they bred there; but this is doubtful. They are said to nest abundantly in the interior of British Columbia, and they also winter to some extent on the shores of that Province. Parties of them are occasionally to be met with on Puget Sound and Gray's Harbor in the rainy season but the great majority go further south.

No. 299.

SABINE'S GULL.

A. O. U. No. 62. *Xema sabinii* (Sab.).

Synonym.—FORK-TAILED GULL.

Description.—*Adult in summer:* Head and upper neck all around plumbeous-slate, bordered posteriorly with black; mantle dark pearl-gray; primaries black, the inner ones changing to white marked with plumbeous, the first five with white tips and white on the inner webs; remaining plumage, including slightly forked tail, white; bill black, tipped with yellow; legs and feet black; eyelids orange. *Adult in winter:* Similar, but slaty color of head and neck reduced to ear-coverts and nuchal region; rest of head and neck white. *Young:* Above, including most of head and mantle, grayish brown, each feather darkening distally and tipped with buffy; tail white with a broad blackish subterminal band; forehead, lores, upper tail-coverts, and underparts white. Emargination of tail about 1.25; that of young not much less (Coues). Length 13.00-14.00 (330.2-355.6); wing 10.50 (266.7); tail 4.75 (120.6); bill 1.00 (25.4); tarsus 1.25 (31.8).

Recognition Marks.—Little Hawk size. Black of wings and slate of head and neck more extensive than in *L. philadelphia*; bill black with yellow tip; tail slightly forked; the black ring bordering the slate of head and upper neck all around is also distinctive.

Nesting.—Does not breed in Washington. *Nest*: on the ground, sand beaches, moss beds, etc. *Eggs*: 2-5, light or dark olive, obscurely spotted or blotched with brown. Av. size, 1.75 x 1.20 (44.5 x 30.5).

General Range.—Arctic regions; in North America south in winter to New York, the Great Lakes, and Great Salt Lake, and irregularly along Pacific Coast to Peru. Casual in Kansas, Bermuda, etc.

Range in Washington.—Casual on (and off) West Coast during migrations. Two records, one by Dr. A. K. Fisher, Sea Island, Shoalwater Bay, Sept. 24, 1897.

Authorities.—**Dawson**, Auk, Vol. XXV, Oct. 1908, p. 484 (*Fide* A. W. Anthony).

Specimens.—(P. Alaska.)

THIS, the handsomest of the hooded gulls, was first given a place upon our list on the authority of Mr. A. W. Anthony, who sighted one off the Washington coast in the winter of 1898-99. This wandering is not unusual, for the bird has been taken as far south as Peru. And again, Anthony says: "I have once or twice picked up a lone Sabine's Gull three or four hundred miles offshore, but the vessel offered but a momentary attraction, for after one or two tacks across the wake, as if to read the name and hailing port on the counter, the independent rover was gone." More recently, Dr. A. K. Fisher writes us that he took a specimen at Sea Island in Shoalwater Bay, September 24, 1897. When first seen the bird was running about on the beach busily engaged in picking up sand-flies and other crustaceans. Brooks has taken the Sabine Gull at Okanogan Lake; and a sharp lookout should be kept for it in the interior as well as on the coast.

No. 300.

FORSTER'S TERN.

A. O. U. No. 69. *Sterna forsteri* Nutt.

Description.—*Adult in summer*: Top of head and nape sooty black; rump white, shading on upper tail-coverts, remaining underparts pale pearl-gray; wing-quills dusky, heavily overlaid to tips with silvery gray, with ivory shafts, and with white (decreasing inwardly) on the inner webs; tail the color of back, deeply forked, the outer pair of feathers much elongated and tapering, reaching beyond the tip of the folded wing; *their inner webs of a much darker gray than the narrow outer webs*; underparts white; bill dull orange basally, the terminal half, or at least third, blackish; feet orange-red. *Adult in winter*: Similar, but black

cap wanting, represented only by dusky stripe on side of head, and by grayish tinge of hind-head and nape; tail shorter and not so deeply forked, the outer feathers broader and less tapering; bill duller, the dusky tip scarcely contrasting; feet dull reddish. *Young*: Like adult in winter, but upperparts varied by, or overlaid with, light brownish; sides of head more or less tinged with the same shade; tail shorter, its feathers becoming dusky terminally. Length 14.00-15.00 (355.6-381); wing 10.00 (254); tail, the central feathers, 2.80 (71.1); the lateral pair 6.75-7.00 (171.5-176.1); bill 1.57 (39.9); depth at base .40 (10.2); tarsus .08 (2.0).

Recognition Marks.—Size of Common Tern; distinguishable from it by subtle but sure marks; the bill is stouter and more extensively black on terminal portion; the upper tail-coverts are grayer; the tail more deeply forked, and the outer pair of feathers dark on *inner* webs.

Nesting.—*Nest*: in colonies in marshes on the ground of low islands, in grass, etc., lined with grasses, flags, and the like. *Eggs*: 2 or 3, rarely 4, dull white, greenish white, olive-gray, ashy-brown, etc., spotted and blotched with blackish brown or umber, and with shell-marks of stone gray and lavender. Av. size, 1.80 x 1.25 (45.7 x 31.8). *Season*: June; one brood.

General Range.—North America generally, breeding from Manitoba southward to Virginia, Illinois, Texas, and California; in winter southward to Brazil.

Range in Washington.—Breeding in marshes in Douglas County; doubtless summer resident and migrant elsewhere about smaller lakes of East-side.

Authorities.—*Not previously published*. ["Foster's (sic) tern" Johnson, Rep. Gov. W. T. 1884 (1885), p. 23.]

Specimens.—(U. of W.)

THE name *forsteri* serves to designate a very individual Tern, but the word is eloquent also of the early ornithological struggle. The Forster Tern has, in fact, emerged only by slow degrees from a chaos of ornithological misapprehension and neglect, such as, for example, shrouded the infancy of the Rough-winged Swallow (*Stelgidopteryx serripennis*), or the Williamson Sapsucker (*Sphyrapicus thyroideus*). Forster's *alter ego* was, of course, the Common Tern (*S. hirundo*), to which it does bear a close superficial resemblance. Swainson and Richardson described specimens under the title *S. hirundo* in their "Fauna Boreali-Americana," in 1831. Nuttall, struck with the oddity of the characters assigned, proposed the name *Sterna forsteri* in a footnote of his "Manual" (1834). Audubon described an imperfect plumage of this bird under the caption *Sterna havelli*, in 1839, but it was not until 1858 that its characters were clearly defined by Lawrence.

Misapprehension as to the bird's distribution naturally persisted for a much longer time, and the last word has probably not even yet been said. Coes, in 1874, wrote^a: "It breeds in the interior of British America and very abund-

a. "Birds of the Northwest," pp 679, 680.

antly. It may yet be found to nest in or near the northern tier of States." It has since actually been found breeding south to Texas and Lower California, and east to Virginia,—in short, "in suitable localities thruout the United States."

Forster's Tern is pre-eminently a marsh-haunting species, and its range in Washington appears to be confined to a few of the interior lakes. We have observed them in small companies only on Moses Lake and at Brook Lake in Douglas County. In this last-named haunt their graceful gyrations impart the crowning touch of interest to a fertile and well-remembered swamp. They arrive early in May, but take only a languid interest in local affairs until the first or second week in June, when the Western Grebes are, or should be, thru with their very convenient, and to the Terns quite indispensable, nesting platforms. Altho the Grebe has a cruel beak, she seems unable, or unwilling, to use it in self-defense, and will not contest possession with the saucy Tern, even tho her own eggs be half incubated. The nest shown in the accompanying illustration happened to be a fresh one, upon which the Tern had made very hasty requisition: but I have seen others in which the eggs of the rightful owner were nearly buried under a little turret of dried reeds, upon which the Tern had been allowed to place her full complement of eggs.

Tho she herself be an interloper, the brooding bird resents intrusion, diving angrily at the human visitor and giving vent to the only cry which this bird utters, a harsh, low *a-a-a* (like the *a* in *bad*), absurdly ineffective as a warning. All the neighbors join in the defense, and the intruder is berated in many inflections of very platt Deutsch. Every other point in the bird's make-up, the mild eye, the jaunty cap, the snowy under-plumage, the graceful lines of contour, the flowing streamers of the tail, so belie this vulgar vehemence that the observer is moved to jeer: "Aw, now, you ar'n't so *very* mad!"

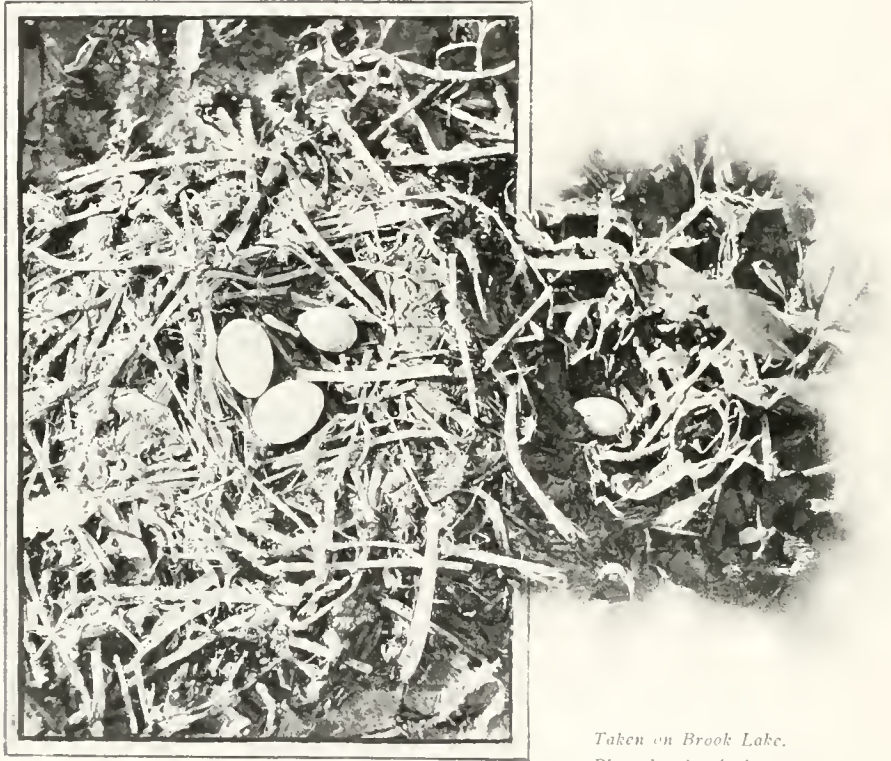
Out of nesting hours the Forster Terns appear to divide their time about



*Taken in Douglas County.
Photo by the Author.*

FORSTER'S TERN.

equally between fishing, hawking, and loafing. At fishing time the birds move about in leisurely fashion at a height of from ten to forty feet above the lake. The beak is carried point down like that of a mosquito, and the bird is evidently giving close attention to the water. Sometimes the bird hovers to make sure of the nature of its prey; but oftener, without an instant's hesitation, it plunges souse! into the water, sometimes passing clear from sight, and



*Taken on Brook Lake.
Photo by the Author.*

CONFLICTING CLAIMS.

TWO EGGS OF THE WESTERN GREBE AND ONE OF THE FORSTER TERN OCCUPY THE NEST PROPER,
WHILE A WAIF EGG OF THE AMERICAN COOT APPEARS ON THE RIGHT.

emerges a moment later with a wriggling minnow in its beak. When the insects are flying well, the Terns prefer to hawk. Dragon-flies and caddis-flies are favorite quarry, and in pursuit of the latter the birds will often rise to a height of several hundred feet. But loafing is really Forsters' forte. They will stand around by the hour on fence-posts, in amiable listlessness, or they will foregather with their fellows in measureless content upon some low-lying mud-reef. Really, now, it rests the mind merely to recall these lazy Lazzaroni.

No. 301.

COMMON TERN.

A. O. U. No. 70. *Sterna hirundo* Linn.**Synonyms.**—WILSON'S TERN. SEA SWALLOW. "BASS-GULL."

Description.—*Adult in summer:* Top of head and nape uniform deep black; back and wings pearl-gray; wing-quills dusky, more or less silvered over, except on outer web of outer primary; the inner half of inner webs sharply white, but not reaching tip; rump, upper tail-coverts and tail (basally and centrally), white; tail deeply forked, the outer pair of feathers elongated and narrowly tapering but not, or barely, reaching the tips of closed wings; their outer webs abruptly grayish-dusky, contrasting with white of inner webs; the succeeding pair also similarly marked; underparts white, tinged, except on throat and crissum, with pale pearl-gray or lavender-gray; bill vermilion-red, blackening on tip; feet orange-vermilion. *Adult in winter:* Similar, but black cap imperfect, restricted to hinder portion of head, or merely indicated (?); underparts pure white; bill and feet not so bright. *Young* (in August): Forehead and lores ashy-gray; region about eyes, hind crown, and nape leaden black; back, scapulars and wings pearl-gray, each feather tipped with brownish-buff and mingled subterminally with brownish-dusky, forming a strong bar; upper tail-coverts and tail lighter pearl-gray, the central feathers of the latter tipped with buffy; the anterior lesser wing-coverts bluish-dusky, with narrow ashy edgings; edge of wing and quills plumbeous-gray; underparts, white. Length, 13.00-16.00 (330.2-406.4); wing 10.75 (273); tail 5.00-6.00 (127-152.4); bill 1.38 (35.1); tarsus .80 (20.3).

Recognition Marks.—Little Hawk or Crow size; black cap; pearl-gray mantle; deeply forked tail; extensive white, or pale grayish plumage; graceful flight. Known from the preceding species by outer pair of tail-feathers dark on the *outer* instead of the inner web; underparts not pure white in breeding season. Bill tipped with black as distinguished from next species.

Nesting.—Not known to breed in Washington. *Nests:* in colonies, on beach shingle, or in grass of low islands, lined or not, with bits of bark, grass, etc. *Eggs:* 2 or 3, rarely 4, very variable in ground color—light bluish or greenish, dull white, stone, light olive, etc., spotted and blotched heavily, or not, with blackish-brown or chocolate, and with lavender shell-marks. Av. size, 1.60 x 1.20 (40.6 x 30.5). *Season:* June; one brood.

General Range.—Greater part of the northern hemisphere and Africa. In North America, chiefly east of the Plains, breeding from the Arctic Coast, somewhat irregularly, to Florida, Texas, and Arizona, and wintering northward to Virginia. Also coast of Lower California. Appallingly reduced in numbers within recent years.

Range in Washington.—Not uncommon, sometimes abundant during migrations, chiefly coastwise; carries locally in September on lower Sound.

Migrations.—*Spring:* c. May 15; Port Townsend, May 13, 1908 (1000). *Fall:* August 25-Sept. 30.

Authorities.—Dawson, Wilson Bulletin, No. 39, June 1902, p. 59. Also specimens taken Blaine, Aug. 28, 1906. E.

Specimens.—Prov. E.

WHAT a piece of work is a Tern! how gentle in instinct! how untrammelled in discursion! in form and moving how elegant and admirable! in action how like the swallow! in innocence how like the dove! the beauty of the air! the paragon of sea-birds!

Terns are the animating spirits of summer seas. Not bluff and sturdy like the Gulls, they have little place in winter's storm, but when the sun has re-established his dominion and only Zephyr pricks the caracoling waves, then the blue-gray daintiness of the Tern is as necessary to the scene as are the criss-cross mirrors of the amethystine sea. We hail with delight the appearance in the offing of a busy, happy company of the white-winged birds, weaving in the air by their incessant plyings a close-meshed fisher-net, wherein many a luckless minnow is entangled. Soon a lone straggler from out the company drifts shoreward, parting the air with graceful wing, now pausing critically over a suspected fish, like some pensive mosquito with his beak down-turned; now dropping with a splash beneath the wave, or making a nimble catch at the surface without wetting his plumage. Ever and anon the muffled undertone of the waves is pierced by a weird and half-petulant cry, *te-cr te-créc*, childish, plaintive, yet somehow thrilling and exultant. And as the bird passes to rejoin his companions, you find he has borne away your fancy evermore to hover where blue skies laugh at blue waters, and innumerable wavelets trifle with innumerable sunbeams.

It is passing strange that the Common Tern should be so little known as a bird of Washington. It is regular and sometimes abundant during the migrations, at least on Puget Sound, yet none of the older authorities make mention of it. Edson has both seen and shot it at Bellingham, and I have taken specimens at Blaine, else we should begin to doubt the evidence of our eyes. There are perhaps no nesting colonies within the limits of the State, certainly not along the west shore within the confines of the Olympiades. We have word however, of an extensive ternery off the west coast of Vancouver, and others unquestionably exist in southern Alaska.

Common Terns nest upon low-lying islands of the larger interior waters, as well as upon both coasts. A visit to such an island is a treat, not only because one sees eggs enough (if that were possible), but because birds in quantity maintain an electric atmosphere of excitement which is tonic to jaded nerves. It was once the author's good fortune to visit such a group of islands in Lake Erie. Upon one of these, Chicken Island, a gravelly reef of perhaps an acre's extent, we found only a small fisherman's hut and two stunted willow trees, while the birds, to the number of 2000, were everywhere, even invading the deserted hut itself. The odor of guano was rather strong, but the sight of the restless, hovering multitude of "Sea Swallows" made anything endurable.

Altho the season was far advanced, August 7-8, 1901, nests and eggs abounded, making it appear probable that the colony had been plundered earlier in the summer, or else had been overwhelmed in time of storm. We made the circuit of the island like excited children, only taking care not to crush the eggs beneath our feet. The birds themselves were tireless in voice and wing, and would not be lulled to any sense of security, while the strangers were on their premises. The convenient, terrace-like arrangement of the ground invited the taking of a census, which showed the following results: empty nests, 200; nests with eggs, 232; nests with young only, 25; loose squabs, 26.

Some of the nests were quite respectable affairs, neat cushions of bark and feathers and trash; but for the most part eggs were dumped just anywhere on the gravel. Two nests were found in the corners of dry-goods boxes, which had been cast up on the reef. One of these contained a waif cork by way of a nest-egg. Upon another island the soft bedded masses of driftwood proved to be a favorite nesting site, altho gravel was not forsworn. At one spot I dug my toe into an empty nest for a base and "fetching a compass" with my hands, touched eggs or young in fifteen nests.

More romantic still, was the scene at North Harbor Island, some six miles further to the northwest. Here a limestone knob, two acres in extent, rough-chiseled by the ancient glacier, supports a skirting fringe of gravel on one side, and a considerable grove of hackberry trees in the center. As we drew near this charming spot, toward sunset, the island with its attendant halo of timorous Terns, rose out of this inland sea like the fabled Atlantis in miniature, an enchanted isle of wondrous beauty. As the barque of the gentle pirates grated on the strand, a thousand Purple Martins rose in a cloud from a dead hackberry tree and whirled about in wild confusion until better counsels prevailed and they returned to slumber.

Not so the Terns. Nothing could completely lull their fears; altho, when we made our bivouac in the woods, the mothers did settle to their eggs. The Terns were everywhere. We found them nesting indifferently upon the polished limestone of the western shore, the naked gravels of the south end, the grassy paddocks of the upland, or within the dim and grassless shade of the interior. The Terns owned the island and their clamor was really unceasing. A few were crying all night long, and the noise at four o'clock in the morning was nothing short of an uproar. We estimated that something like fifteen hundred Terns found harbor upon the island, but we did not attempt a nest-and-egg census.

No. 302.

ARCTIC TERN.

A. O. U. No. 71. *Sterna paradisæa* Brinn.**Synonyms.** PARADISE TERN. CRIMSON-BILLED TERN. PORTLAND TERN.

Description.—*Adult in breeding plumage:* Outer pair of tail-feathers and black of head as in preceding; upperparts deep pearl gray, the secondaries, rectrices, feathers of rump, and upper tail-coverts, tipped with white in strong contrast; underparts deep lavender-gray, clearing to white only on lower tail-coverts and on sides of head adjacent to black cap; bill carmine, sometimes faintly tipped with blackish; feet rich carmine. *Adult in winter plumage:* Similar, but underparts white, or tinged with grayish; forehead, fore-crown, and lores, anteriorly, white; crown posteriorly streaked or mottled with blackish. *Immature:* "Orbital region, occiput, and hind part of crown dull black; forehead, anterior part of lores, and crown white, the latter stained with brown and mixed with blackish; feathers of dorsal region and wings tipped with pale buff and marked with subterminal crescent or lunule of brownish dusky, these markings larger on tertials and longer scapulars, and smaller on back; lower rump, upper tail-coverts, and entire lower parts, white, the chin, throat, and sides of jugulum and breast, stained with pale dull brownish; basal half of bill dull orange-red, terminal portion blackish; feet light reddish" (Ridgway). Length of adult: 14.00-17.00 (355.0-431.8); wing 10.00-10.75 (254-273.1); tail 6.50-8.50 (165.1-215.9), forked for 4.00-5.00 (101.6-127); bill 1.30 (33); tarsus .55-.65 (14-16.5).

Recognition Marks.—Size of preceding; tail more deeply forked, its outer feathers gracefully streaming; bill usually pure carmine.

Nesting.—Not known to breed in Washington. *Nest* and *Eggs* much as in preceding species.

General Range.—Coasts of both hemispheres during migrations, summering in the northern hemisphere, chiefly in the Arctic regions, but breeding in North America from Massachusetts and British Columbia northward; wintering chiefly in Antarctica but also along both coasts of North America.

Range in Washington.—Probably common, coastwise, during migrations. (Apparently no specimens of this species have been taken in Washington, and it has not been clearly distinguished from *S. hirundo*).

Migrations.—*Spring:* May? *Fall:* September (Blaine).

Authorities.—? Keck, Wilson Bulletin No. 47, June 1904, p. 34 ("Common summer resident").

Specimens.—Prov.

A LITTLE more graceful, if possible, than the Common Tern, the yearly passing and re-passing of this species ought to occasion comment. As it stands, however, we hesitate to record it at all, since its status rests solely upon specimens *seen* by Mr. Keck and myself. We know that the bird must cross our borders, since it breeds upon the Arctic coasts in immense numbers, but it

is probable that the migratory movement is rather compact, and that the birds do not always come closer than the outer coast.

A most interesting fact in connection with the life history of this species has recently come to light. While the bird breeds in the northern portions of the northern hemisphere, it summers (i. e. Antarctica speaking) chiefly within the Antarctic Circle. In it, therefore, the migratory instinct is more highly developed than in any other creature, and it is the only bird which, individually as well as generically, may have distanced *both* Peary and Gleason.

No. 303.

BLACK TERN.

A. O. U. No. 77. *Hydrochelidon nigra surinamensis* (Gmel.).

Description.—*Adult in summer:* Head and neck all around, and underparts sooty black; the crissum white, and the edges and lining of wings white or pale pearl gray; underparts plumbeous, darker on upper back, where it blends thru slate with black cervix; primaries not different on exposed webs, the inner webs, however, dusky, lightening on the inner half, and the shafts white; tail slightly forked; bill and feet black. *Adult in winter:* Lighter, the black replaced by white, save on back of head, orbits, and auriculars, where obscurely persistent; upperparts deep pearl gray. *Immature:* Like adult in winter, but upperparts more or less tinged and tipped with brownish, and sides washed with grayish. Length 9.00-10.25 (228.6-260.4); wing 8.00 (203.2); tail 3.00 (76.2); bill 1.04 (26.4); tarsus .67 (17).

Recognition Marks.—Chewink to Robin size, but appearing about Killdeer size; sooty black and plumbeous coloration distinctive in breeding plumage; *dark* pearly gray of upperparts with *black* bill (and feet), with small size sufficiently distinctive at other seasons.

Nesting.—*Nest:* in marshes, on the ground, or on broken-down reeds, old Grebe nests, old musk-rat houses, and the like. *Eggs:* 2 or 3, sometimes 4, grayish olive, or pale brownish, heavily spotted and blotched with blackish brown, the markings sometimes confluent at larger end. Av. size, 1.35 x .98 (34.3 x 24.9). *Season:* c. June 10; one brood.

General Range.—Temperate and tropical America. From Alaska and the Fur Countries to Brazil, breeding from the middle United States, west of the Alleghanies northward.

Range in Washington.—Common summer resident in marshes on the larger lakes of the East-side; casual on Puget Sound (one record: Aug. 26, 1899, Nooksack Marsh, near Bellingham, by J. M. Edson).

Authorities.—["Black tern," Johnson, Rep. Gov. W. T. 1884 (1885), 23.] Johnson (Roswell H.), Condor, Vol. VIII. Jan. 1906, p. 27. T. F.

Specimens.—U. of W. P. Prov. E.

IN some of the prairie states of the Middle West the Black Tern seems to be a sort of connecting link between the birds of land and water. There it is found either singly or in little companies, ranging over the prairie with the freedom of a swallow and at considerable distances from its breeding haunts. In our own State it is more strictly confined to the vicinity of the extensive tulé swamps of the interior lakes, or to the adjacent meadows, and appears to have no interest in the sagey uplands. During the migrations the birds may take a turn about some wayside pond, or even pause at the Snake River; but they attract little attention save in the vicinity of the swamp itself.



Photo by the Author.

IN ANGRY MOOD.

The Terns arrive upon their breeding grounds during the second week in May, but they are not usually in haste to begin their nesting, since there is danger not only of high water and destructive storms, but of cold snaps as well. Nesting is at its height during the second week in June, but fresh sets are sometimes obtainable well into July. August is spent in leisurely fashion, either in loitering about the more

secluded lakes or remaining in the accustomed swamps. The return movement begins late in August, and continues in a desultory fashion well into September, but may be accelerated by early frosts.

The food of the Black Tern consists almost exclusively of insects. These are obtained a-wing, and in securing them the bird exhibits great dexterity,—now towering to a lofty height, with a single stroke against the wind, to make connections with a drifting moth; now following a bewildering zigzag thru the reed-tops in pursuit of the agile dragon-fly. In the fall I have seen them busily engaged over beds of pickerel-weed. On these occasions they feed with a peculiar dabbling motion, by which they cull some tidbit from the surface of the weed-strewn water, and regain a higher level after each stroke without wetting the wings; but whether they find insect prey or only vegetable matter, I have not been able to determine.

In searching for the nests of the Black Tern one must penetrate the oozy recesses of some undisturbed swamp, preferably in a flat-boat. Here in a secluded bayon the birds will hover about the intruder, fretting and scream-

ing incessantly. If the water becomes too thick with mud and tangled vegetation to admit of easy passage, one must be content to strip off and wade thru black water, say six inches deep, over black mud one and a half feet deep, and be prepared as well for occasional plunges into uncharted depths. When one gets "hot" in this ancient game of hide-the-thimble, the most interested pair of birds will single themselves out from the hovering throng and prepare for defense. Unless their advances are early discouraged, the boldness of these two will increase until they actually strike the intruder on the head, to say nothing of frequent salutations with flying shearn. At the same time the characteristic cry, *krik, krik*,—lighter in character than that of the Forster Tern, but still guttural and harsh—is flatted by anger into *kra-ack, kra-ack*.

The nests are placed variously in the swamp, sometimes on a little raft of floating vegetation which the bird has brought together, sometimes on a truncated cone of fresh-cut herbage and twisted grasses resting upon the solid earth, but oftenest upon the ample expanse of some Grebe's nest, new or old. The little tyrants have no hesitation in appropriating a Grebe's nest of fresh construction, even tho the rightful owner has already deposited eggs. The spitfires have the advantage in



Taken on Brook Lake.

Photo by the Author.

NEST AND EGGS OF THE BLACK TERN.

being able to strike from above, and it is to be feared they sometimes resort to mob tactics in case of serious opposition. The pale olive-brown eggs, heavily spotted and blotched with blackish brown, harmonize so perfectly with their surroundings of decaying and mud-spattered vegetation, as almost to elude the sight even after being once discovered.

No. 304.

AMERICAN MERGANSER.

A. O. U. No. 129. *Mergus americanus* Cass.**Synonyms.**—GOOSANDER. SHIELDRAKE. SAW-BILL. FISH DUCK.

Description.—*Adult male*: Head and upper neck greenish black, the hind-neck loosely crested; upper back, inner scapulars, and a prominent short bar formed by exposed bases of greater coverts, black; the primaries and their coverts dusky; lower back and tail ashy-gray; neck all around, outer scapulars, most of the wing coverts, speculum, and entire underparts white, the latter delicately tinged with pale salmon (this generally fading to creamy-white in skins); tertiaries white, bordered narrowly with black; flanks wavy-barred, ashy-gray and white; bill and feet vermillion, the former black on ridge, with black hooked nail; iris carmine. *Adult female and immature*: More conspicuously crested on hind-head and nape; the head and upper neck dark cinnamon-brown, white on chin and sides of throat; above ashy blue-gray, with white speculum and black of wings much as in male; underparts white, shaded on sides with color of back, and faintly tinged with salmon; bill red with dusky ridge; feet chrome-yellow or orange, with dusky webs; eyes yellow. Length 25.00-27.00 (63.5-68.5.8); wing 10.75 (27.3.1); tail 4.25 (10.8); bill 2.15 (5.4.6); bill from nostril 1.50 (3.8.1); tarsus 1.90 (4.8.3). Female averaging three or four inches shorter and proportioned accordingly.

Recognition Marks.—Mallard to Brant size; long, narrow bill with prominent serrations on side; underparts white or pale salmon tinted; no rusty or ochraceous on breast; nostrils just within basal *half* of bill. Lovers of swift waters; river divers.

Nesting.—*Nest*: occasionally on the ground, more commonly in hole of tree or stub, lined with moss, grasses, and feathers. *Eggs*: 6-10, yellowish or creamy buff. Av. size, 2.65 x 1.80 (67.3 x 45.7). *Season*: c. May 1st; one brood.

General Range.—North America generally, breeding south in the United States to Pennsylvania and the mountains of Colorado and California.

Range in Washington.—Common winter resident and migrant, less common summer resident; found thruout the State but more abundant coastwise.

Authorities.—**Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 814. (T). C&S. L. Rh. D. Sr. Kk. B. E.

Specimens.—(U. of W.) Prov. B.

THE first glimpse of this splendid bird ever vouchsafed the writer was upon the rock-bound shore of that matchless gem of mountain lakes, Chelan. The bird had been surprised at the water's edge, and winged as he attempted to rise. With instant decision he took to the water and dove sharply. When some twenty feet deep, he turned and paralleled the shore, intending to make a landing at some distance and secrete himself among the rocks. It was a rare sight from my vantage point some forty feet above, to watch the

duck cleaving the water with strong concerted strokes of his vermilion feet. In that limpid water the resplendent black of his head and the salmon-tinted sides shone almost as if there was nothing between us. I am almost sorry to add that his ruse was not successful, and that his skin now rests in an eastern museum.

Not only are these Mergansers expert divers, but the sharp "teeth," inclining backward as they do, are calculated to hold the most slippery prey. Fish caught in fair pursuit form the bulk of their food, but frogs, water insects, cray-fish, and other crustaceans, vary the monotony. Since the taking of such prey depends primarily upon unimpeded eye-sight, it goes without saying that these birds prefer clear waters and free course. Hence, they are more often found upon our rivers, even the swiftest mountain streams, than upon the East-side lakes and reed-grown ponds. It is to be feared that when the Fish Duck encounters a lusty school of herring or a company of young salmon he does not agree that "enough is as good as a feast." An Arctic authority, Hearne, states that it devours fish in such great quantities as to be frequently obliged to disgorge several before it can rise from the water. It is noteworthy in this connection that the skin of the throat is unusually elastic, so that the bird can accommodate a large catch. Mr. Bowles once shot a female which had a suspiciously swollen throat. A post mortem disclosed a seven-inch trout, whose head was digesting comfortably, but whose tail had not yet found entrance into the bird's stomach. After an especially satisfying meal the bird is likely to clamber ashore in some secluded spot and indulge in a digestive nap. On such an occasion I once got near enough to sprinkle salt on the gluttonous creature's tail, but a grating pebble gave the plot away before I got my hands upon her.

Like the Golden-eye and certain other ducks, this Sheldrake usually occupies a hollow tree or stub for a nesting site. Now and then a crevice in the face of a cliff does duty, and old nests of hawk or crow have been pressed into service. Moderate elevations are favored, but Mr. Bowles once found a nest near Puget Sound in a decayed fir stub at a height of over a hundred feet. The cavity, wherever found, is warmly lined with weeds, grasses, and rootlets, and plentifully supplied with down from the bird's breast. The eggs are of a clear creamy, or dull buffy, tint, and have that "hard-oil" finish characteristic of so many ducks' eggs, and they are further polished by four weeks of incubation. The young, when hatched, require to be transported to the water in the maternal beak—a rather trying ordeal, we must presume, in the case of that tenth-story tenant of the fir stub.

No. 305.

RED-BREASTED MERGANSER.

A. O. U. No. 130. *Mergus serrator* Linn.**Synonyms.**—RED-BREASTED SHELDRAKE. SHELDRAKE. SAW-BILL.

Description.—*Adult male*: Head all around black, with a greenish gloss on sides above; a loose crest from crown to nape; middle of neck all around white; lower neck all around (narrowly and impurely behind) and fore-breast, cinnamon-rufous streaked with black; sides of breast, upper back, and inner scapulars black; a tuft of enlarged feathers on sides of breast before wing, each feather white, bordered completely with black; wing-coverts, outer scapulars, speculum, and inner secondaries white, the last black-edged; two narrow transverse black bars formed by exposed bases of greater coverts and secondaries; primary-coverts, outer secondaries, and primaries blackish; sides and around on rump heavily wavy-barred, black and white; lower back and tail ashy gray, more or less speckled or wavy-barred on tips with black and whitish; lower breast, belly, and crissum white, usually tinged with pale salmon or cream color; bill narrower than in preceding species; bill and feet bright red, the former with dusky ridge; eyes carmine. *Adult female and immature*: Similar to those of preceding species, but head duller, grayish chestnut; white of wing without black bars; position of nostrils distinctive; bill and feet duller-colored. Length 20.00-25.00 (508-635); wing 9.60 (243.8); tail 3.25 (82.6); bill 2.20 (55.9); bill from nostril 1.75 (44.5); tarsus 1.75 (44.5). Female somewhat smaller than male.

Recognition Marks.—Mallard size; narrow serrated bill; head loosely crested; reddish of breast and sides wavy-barred black and white, specifically distinctive for male. Females of this species cannot be told out of hand from those of *M. americanus*. In hand the nostril within basal third of bill (as distinguished from nostril just within basal half for *M. americanus*) is diagnostic. River divers.

Nesting.—*Nest*: on the ground under logs, brush, rocks, and the like, near water; lined with leaves, moss, and feathers. *Eggs*: 6-12, creamy buff or dull buffy green. Av. size, 2.56 x 1.76 (65 x 44.7). *Season*: April 20-May 10; one brood.

General Range.—Northern portions of the northern hemisphere; south in winter thruout the United States; breeding northerly in the United States and in the mountains of the West.

Range in Washington.—Common resident on streams and lakes thruout the State; more common winter resident and migrant on Puget Sound.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle: Coues, Vol. II, p. 193.] **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 815. C&S. Rh. D^c. Kb. D². Kk. B. E.

Specimens.—U. of W. Prov. BN.

SWIMMING is the way of nature and flying a slowly acquired art for the Sheldrakes. The adults, indeed, are capable of rising quickly and flying with great rapidity at a considerable height, but oftener they patter over the

surface of the water to get a running start, and then with outstretched neck and supple wing skim along close to the water, as tho loth to leave its friendly shelter. Many a time have I seen them in the swiftest part of some rushing stream, repeatedly breasting the current with tireless energy for the sake of being swept along some favorite riffle under water, adding thus the momentum of the stream to their own power of locomotion in enabling them to seize quickly unsuspecting trout.

The young birds swim from the shell, but are nearly full grown before they can fly. A troop of half-grown young under the care of the mother bird affords an interesting study, and not infrequently provokes some novice to make the exertion of his life at the oars. At this time there is scarcely more than a trace of muscular tissue on the breast of the youngsters, but the swimming gear, the legs and hinder portions, is fully developed, so that in motion the birds look curiously like long-necked water bottles. If pursued in a boat the brood keeps well together, each bird leaning forward, almost standing on the water, and keeping up a motion like a tiny stern-wheeler, the whole flock leaving a wake behind them not unlike that of a small steamer. The anxious mother directs the flight, now dropping into the water to urge the chicks to greater exertions, now flying back to distract the attention of the pursuers, or to develop some ruse to cover the escape. Once when a party of us were pursuing a brood in this manner along the rocky shore of Lake Chelan, the mother bird hit upon a very clever scheme. When the flock was becoming winded and we would head in toward them, she would fly between us and the shore, pretending to lead the flock back down the lake. At first we bit eagerly, and pressed in between her and the flock, intent on cutting off the retreat, only to find upon looking about that the cunning mother had made a wide circuit around us and was urging her brood up the lake again at a headlong speed. Finally, when thoroly tired out, after a three mile chase, the ducklings took to shore and hid successfully in the loose rubble of the beach without the aid of a scrap of vegetation, and near water so clear that a movement could have been detected at a depth of a hundred and fifty feet.

Not content with this baffling experience I tried again, and single-handed, ten years later, when a female Merganser with a dozen ducklings—mere down-balls, *not over two days old*—was sighted in the same waters. It looked so easy, and the photograph was to have graced this very page. Mother Red-breast had begun to cackle apprehensively before she knew herself discovered. When the battle was on she played for open water, but I headed off the retreat, being possibly a little better at the oars than the infants at the paddles on a straightaway course. Twice the mother bird played dead, but usually she kept close to the chicks and only urged the extreme onpaddling flight when necessary. At plain swimming the birds were poor, but at fluttering over the water they certainly were great, for babies. Finally I did succeed in separat-

ing the brood by cutting out four of the laggards; and these the mother bird appeared to resign as she urged the others out into the open water. But the little quartette were brave, for they sighted the first loophole of opportunity and raced past me single-file, like little sizzling meteors. The mother and brothers awaited their approach in trembling anxiety, and the reunited family set off at a terrific pace without allowing the little adventurers an instant's rest. But here the bird-man quite desisted. Generous? Oh, no; just dog-tired.

We are accustomed to regard trout as symbols of strength and agility, but so successful is this bird in pursuing its finny prey in their native torrents that it gets itself cordially hated by the angler as well as admired by the ornithologist. A wise Merganser learns to know its friends, and in the presence of the other sort manages to reconnoiter with only the bill and the top of the head thrust out of water. This ruse is invariably adopted by a wounded bird in making its escape.

This bird is reported as nesting near the ocean, but all we have seen have been in the vicinity of fresh water. Eggs are laid in scantily constructed nests, under drift-wood, logs or rocks, and always near water. The male deserts his mate as soon as the eggs are laid, and lives a life of lonely and selfish, albeit adventurous, ease. In winter the birds are found upon salt water in considerable numbers; and from the fact that flocks of six or eight are about the average, we judge that family groups remain clustered about their mother until early spring.

No. 306.

HOODED MERGANSER.

A. O. U. No. 131. *Lophodytes cucullatus* (Linn.).

Description.—*Adult male:* Head with a large compressed semi-circular crest; sides of crest white in large sector, or open-fan-shaped patch; the edge black in a sharply defined border; fore-crown deep brown; remainder of head and neck all around, upperparts, and two transverse crescentic bars on each side invading white of breast, deep brownish black (coal black on lower scapulars); lesser and middle wing-coverts ashy gray; speculum and tips of greater coverts white; two small transverse black bars formed by exposed bases of greater coverts and of secondaries; inner secondaries and tertials white, heavily bordered with black; sides pale to rich cinnamon-rufous, wavy-barred with dusky; bill comparatively short, narrow, black; nostril barely within basal third (measured from anterior margin of loreal feathering); feet light brown; eyes yellow. *Adult female:* Head, neck, fore-breast, sides of breast and sides dull grayish brown; the crest much thinner than in male, entirely cinnamon-brown; upperparts deep

brown, blackening on lower scapulars; wings the same with traces of white on edges of speculum; lower breast and belly white, shaded with brownish on crissum; bill dusky, orange at base and on lower mandible. *Immature*: Similar to adult female, but crest undeveloped. Length 17.00-19.00 (431.8-482.6); av. of five males: wing 7.63 (193.8); tail 3.60 (91.4); bill 1.56 (39.6); tarsus 1.28 (32.5). Females average somewhat smaller.

Recognition Marks.—Larger than a Teal; very conspicuously round-crested. The male even at a superficial glance could be confused only with a Bufflehead (*Charitonetta albeola*). It differs from it in that the white of crest does not come to the edge; and, of course, in its entirely different bill. On more quiet waters,—ponds and sluggish streams.

Nesting.—*Nest*: in a hole of a tree or stump, lined with grasses, etc., and feathers. *Eggs*: 10-12, sometimes more, pale buffy white. Av. size, 2.10 x 1.75 (53.3 x 44.5). *Season*: c. May 1st; one brood.

General Range.—North America generally, south to Mexico and Cuba, breeding nearly thruout its range. Casual in Europe.

Range in Washington.—Rather common migrant thruout the State; sparingly resident in summer.

Authorities.—**Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 816. T. C&S. Rh. D². Kk. J. B. E.

Specimens.—(U. of W.) Prov. B. BN.

THE male of this beautiful little duck is even superior in coloring to that of the foregoing species, being in many respects fully the equal of that *élégant* among the water-fowl, the male Wood Duck. Like the other Mergansers, it travels under more than one alias, being known as Hooded Shelldrake, Hairy-head, and Water Pheasant, the last name being perhaps the most appropriate.

In Washington this is the rarest of the three Mergansers, excepting in spring, when it is fairly common. On the Nisqually Flats I have found it in considerable numbers in March, travelling in small flocks of six or eight. Its flight is very swift and eccentric, resembling greatly that of the Green-winged Teal, for which the bird is easily mistaken in the faint light of early morning or evening. The call includes a variety of guttural chattering notes.

Unlike the two larger species, this bird is seldom found in swift-running water, seeming to prefer the quiet streams and ponds where it can catch tadpoles, small fish, and water insects, without undue exertion in diving.

During early March the flocks separate into pairs, and late in April all retire to fresh water to breed, the majority going north of the United States, but many remaining to nest along the northern border. About the first of May a pair may occasionally be found nesting near any one of the smaller unfrequented lakes of Washington, a natural hollow or large woodpecker hole in a tree near the water being selected for a nesting place. The nest is located at an elevation of from twenty to sometimes sixty feet from the ground, the composition being mainly weeds and grass, with a thick inner lining of feath-

ers. Like the other Mergansers again, the male deserts his mate as soon as the eggs are laid, leaving her to feed herself and attend to the young.

Almost as soon as the eggs are hatched, the female transports the babies to the water, carrying each one carefully in her bill, as is probably the habit of all tree-nesting ducks. This is the rule, but I have been informed on what I believe to be good authority, that these birds occasionally nest on the ground, laying their eggs in a hollow in the moss, beneath the low-spreading branches of some fir or cedar.

J. H. BOWLES.

No. 307.

MALLARD.

A. O. U. No. 132. *Anas platyrhynchos* Linn.

Synonyms.—GRAY MALLARD. "WILD DUCK" (*par excellence*). GREEN-HEAD.

Description.—*Adult male*: Whole head and neck soft, shining, dark green; fore-neck and breast rich dark chestnut, with a purplish tinge, separated from green of neck by narrow white collar not meeting behind; sides of breast, belly, sides and crissum grayish white, finely undulated with dusky; the same continued on back, but largely overlaid or suppressed, except on scapulars, by rich brown of various shades; speculum (terminal portion of secondaries) shining metallic blue or purplish violet, bordered on either side immediately by black and then by white, —the anterior bars furnished by the tips of the greater coverts, the posterior by the tips of the secondaries; rump sooty brown; upper tail-coverts deep black with greenish gloss, the longer central feathers curled upward; under tail-coverts deep purplish black; tail grayish white with dusky speckling and central areas; bill olive-yellow with black nail; iris hazel; feet orange red. *Adult female*: Quite different; speculum much as in male, but remaining plumage dusky and ochraceous or brownish buff, the former centrally on feathers, broadly and prevailing on upperparts, the latter narrowly or obscurely in crescentic, U-shaped, and irregular markings; below brownish buff predominant, brightest on breast, fading on belly; head and neck buff, sharply and finely streaked except on throat and usually chin, where immaculate. *Adult male in summer*: Much like female, but somewhat darker (Sharpe and Dresser). Length 20.00-25.00 (508-635); wing 11.00 (279.4); tail 3.35 (85.1); bill 2.25 (57.2); tarsus 1.75 (44.5). Female averages smaller than male.

Recognition Marks.—The standard of measurement for ducks (size of Domestic Duck). Green head of male; metallic blue speculum, bordered by black and white, of both sexes.

Nesting.—*Nest*: on the ground, usually near water, well hidden in weeds or rushes, sometimes under sage-bush, at foot of tree in woods, etc.; lined with trash and feathers. *Eggs*: 6-12, yellowish drab, pale olivaceous, green, or greenish white. Av. size, 2.30 x 1.70 (58.4 x 43.2). *Season*: c. May 1st; one brood.

General Range.—Northern parts of northern hemisphere; in America south to Panama and Cuba, breeding southward to southern United States; less common in the East.

Range in Washington.—Common resident and migrant thruout the State—formerly abundant.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle: Coues, Vol. II, p. 193.] **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 775. T. C&S. L., Rh. D¹, Kb. D², Kk. J. B. E.

Specimens.—(U. of W.) P. Prov. B. BN. E.

THE Mallard is the best known representative of the duck family, either in Europe or America. Excepting in the Atlantic States, where it is a rather uncommon winter visitor, it is abundant thruout the United States, and along the Pacific coast it is often resident wherever found.

A "wheat-fed Mallard" must be eaten to be fully appreciated, and apart from its flavor its large size makes the bird a great favorite with sportsmen. The flesh is almost always in prime condition for the table, since the bird's diet is almost entirely confined to seeds, acorns, green grass, or clover, and grain of various kinds. A marked exception to this is often found in February. At this season the salmon, having long since deposited their spawn, are to be seen in hundreds along the banks of our streams in all stages of decomposition. In company with a few other ducks the Mallards hold high carnival upon this nauseating fare, and the after effect upon their edible qualities can better be imagined than described.

The call note of the drake is a feeble *quack*, as if he were too hoarse to speak much above a whisper, and it can be heard at a distance of only a few feet. It is the voice of the duck, or female, that gladdens the heart of the sportsman, as he waits impatiently in his "blind" for the coming of daylight. She is the first of all the duck tribe to wake up, and at the earliest signs of dawn her ringing *Quack, quack, quack*, as she starts out in search of breakfast, may be heard at a long distance.

In connection with the Mallard's food a most remarkable state of affairs has come to pass on the Nisqually Flats, a large marsh surrounding the mouth of the Nisqually River, where it empties into Puget Sound near Olympia. These flats have been shot over to such an extent during the past years that the mud has become charged with duck shot. The Mallards eat all of these shot that they can find, evidently mistaking them for seeds or gravel; and the result is certain death from lead poisoning. No other species seems to be so affected; but, incredible as it may seem, during the winter of 1907-8 the writer heard of many such cases, and personally found and examined two. One of the stomachs contained nineteen shot, the other twenty-seven. The

walls of the stomach were eaten away, and the larger intestines were so badly leaded as to have become much contracted.

Altho the Mallard is among the most wary of our ducks, their love for their original nesting place often brings them into our very midst. Few people realize that almost every little pond and marsh, even well inside the city limits, has at least one pair of these handsome ducks nesting in its immediate vicinity. They are seldom in evidence, as at this season their natural caution is most acute, and at the approach of a human being they instantly conceal themselves in the nearest cover.



Taken at Brook Lake.

NEST AND EGGS OF THE MALLARD.

Photo by the Author.

By the first of February nearly all have selected their partners for the nesting season. They still travel in large companies, but watch a flock of them after they have settled down in the open water. At once they separate into pairs, every handsome "Green-head" swimming in close attendance wherever his modestly garbed mate shall lead. Should one of the pair be killed, the other will not mate again that season,—this being true also of the entire Duck family. Nevertheless, the wisdom of our lawmakers permits ducks to be

killed until the 1st of March, which is nothing more nor less than "killing the goose that laid the golden egg." The sportsman would be not one particle more short-sighted if he were to go to the nesting grounds and kill the mother ducks as they are hatching the eggs in the nests.

West of the Cascades the nest is often built at a considerable distance from water, a nest found near Spanaway Lake serving for an example. It was situated one hundred and fifty yards from the lake under a pile of brush on a bushy hillside. The duck, when flushed, tumbled along the ground, feigning a broken wing, but she soon flew quacking to the lake, where she was very shortly joined by the drake. Other nests are built in the heavy fir timber, being placed at the base of a giant tree in exactly the same manner as nests of the Sooty Grouse. East of the Cascades they frequently nest on the reed-covered islands in the lakes, often only a few feet from the water's edge. In such locations the bird seldom feigns being wounded, taking wing instead as soon as she leaves the nest.

Mallards return to the same nesting locality year after year and become greatly attached to it, as the following incident will show. In clearing a piece of heavily timbered land for cultivation, a female Mallard was flushed from her nest of eleven heavily incubated eggs, which, of course, were destroyed. The clearing ended, perhaps a hundred yards further on, in a dense tangle of brush and fern, and in this haven of refuge the mother duck established herself, and was found some three weeks later with a second nestful of eggs. This was a duplicate of her first, and in four weeks time she was successful in bringing out eleven fine young ducklings.

J. H. BOWLES.

No. 308.

GADWALL.

A. O. U. No. 135. *Chaulelasmus streperus* (Linn.).

Synonym.—GRAY DUCK.

Description.—*Adult male*: Head and upper neck buffy, spotted or streaked with dusky; top of head darker brownish; breast and lower neck all around dusky and white, each feather with five to eight concentric half-rings of alternating colors, presenting a handsomely scaled appearance; sides, back and scapulars similarly varied with dusky and white, buffy, or ochraceous-white, in semi-concentric, zigzag, or fine, wavy lines; the posterior inner scapulars, not thus marked, dull cinnamon-brown, darker centrally and edged with lighter, lanceolate; lower back dusky, becoming velvety black on upper tail-coverts and around on sides of crissum; middle wing-coverts bright chestnut; the lesser dull brownish gray, the greater velvety black; speculum white, rather narrowly, the outer secondaries black and dusky, the bounding tertials plain fuscous; belly white or grayish, obscurely barred posteriorly; axillars and lining of wings white; bill blue-black; legs and feet dull orange, the webs dusky. *Adult male in breeding season*:

"Similar to winter male, but colors duller, crown dusky, rump and breast tinged with rusty, and underparts more spotted with dusky" (Kidgway). *Adult female*: "Head and throat as in the male; back fuscous margined with buffy; breast and sides ochraceous buffy, thickly spotted with blackish; belly and under tail-coverts white, more or less thickly spotted with blackish; little or no chestnut on wing-coverts; speculum ashy gray and white; axillars and under wing-coverts *pure white*" (Chapman). Length 19.00-22.00 (482.6-558.8); wing 10.60 (209.2); tail 4.50 (114.3); bill 1.67 (42.4); tarsus 1.60 (40.6). Female smaller.

Recognition Marks.—Something under Mallard size; *white speculum* distinctive; crissum (of male) abruptly black.

Nesting.—*Nest*: on the ground near water, of grasses, lined with feathers. *Eggs*: 8-12, pale buffy or clay-colored. Av. size, 2.09 x 1.57 (53.1 x 39.9). *Season*: c. June 10; one brood.

General Range.—Nearly cosmopolitan. In North America breeds chiefly within the United States.

Range in Washington.—Little known on Puget Sound; common and well distributed in the interior, where breeding.

Authorities.—**Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 783. C&S. L., Rh. B. E.

Specimens.—Prov.

THERE is a tradition, nearly universal, that the Gadwall is not a common bird. There is ground for this judgment, but the impression of scarcity is strengthened by the fact that the birds are of rather sober appearance at best, that they do nothing whatever out of the ordinary, and that they do not largely participate in the northern migrations. In our own State, the breeding population probably exceeds the number of the migrants crossing our northern borders; and at that, is chiefly confined to a few lakes in the northern portion of the East-side.

In habits the Gadwall most nearly resembles the Mallard. Like that bird it frequents the borders of marshes and weed-grown streams where it feeds upon the leaves and roots of aquatic plants, which it obtains both by diving and dabbling. It is not averse to varying its diet by occasional insects and small fish, or it may resort to stubble-fields, by night, to obtain its share of the fallen grain. The Gadwall is at all times a clean feeder, and its flesh is highly prized for the table.

The nesting of the Gadwall is later than that of the Mallard, taking place with us not earlier than June. Any weed-grown field or grassy stretch within a hundred yards of water is suitable, and the female displays great strategy in stealing to her eggs. A mere depression in the ground, well sheltered by over-arching vegetation, is all the bird asks at the outset, but as the deposition of eggs progresses, the duck adds grasses and soft vegetable materials of various sorts, until quite a respectable accumulation results. When the set is nearly complete, an abundance of dark gray down is plucked from the bird's breast and distributed not only under the eggs but along the sides of the nest, so that

when the mother is obliged to leave, a coverlet of down may be neatly and quickly drawn over the whole. This downy spread appears to serve a treble purpose: it both retains the natural warmth of the eggs and excludes the rays of the sun, which are over-ardent at times, and it effectually screens the eggs from observation.

The bird's behavior when surprised depends altogether upon the stage of incubation reached. In general, the bird sits close until discovered; after that, if the eggs are fresh, the duck may flee upon sighting her enemy a hundred yards away; but if the eggs are near hatching, she will endeavor to lead the investigator astray by painfully dragging herself thru the grass. If too much harassed, however, she will desert her eggs outright rather than wait for what she regards as an inevitable doom; and the same remark will apply to almost any of the nesting ducks.



Photo by the Author.

NEST AND EGGS OF THE GADWALL.
AN INCOMPLETE SET.

Gadwalls' eggs are of the creamy type, and thus closely resemble those of the American Wigeon; but are easily distinguishable from those of Shovellers, which have a greenish tinge. Complete sets vary from eight to thirteen, but eleven is the normal full clutch.

No. 309.

AMERICAN WIDGEON.

A. O. U. No. 137. *Mareca americana* (Gmel.).**Synonyms.**—WIGEON. GREEN-HEADED WIGEON. BALDPATE.

Description.—*Adult male*: Head and neck white or light buffy, thickly speckled, except on forehead and crown, with dusky; a space from eye along side of crown to occiput bright glossy green, the color scattering behind; fore-neck and upper breast, sides of breast broadly, and sides narrowly, deep vinaceous, edged more or less with hoary vinaceous; the sides with fine wavy bars; back and scapulars similar, black-and-white-barred, and heavily tinged with vinaceous; tertials lanceolate, velvety black, with greenish reflections on outer webs, and narrowly bordered on outer margin with gray and white; wing-coverts mostly white, the lesser brownish gray, the greater tipped with black; speculum dull black with green gloss only on anterior inner portion, the inner bounding feathers abruptly gray; rump cold brownish gray, lightening to grayish white on upper tail-coverts, both finely wavy-barred with dusky; tail tapering, the feathers sharply acuminate; the central feathers blackish, the lateral ones ashy gray; lower breast and belly white; crissum abruptly black; axillars white; lining of wings white and brownish gray; bill grayish dusky, blackening below and black on tip; feet dull grayish dusky; darker webbed. Old drakes have the extreme chin dusky, and are otherwise lighter about the bill, nearly immaculate on throat, and pure white on crown. *Adult female*: Without white or green on head,—uniformly streaked instead; vinaceous replaced by dull cinnamon-brown; obscurely mixed with dusky, and edged with brownish-gray; above dusky or fuscous, barred or edged on back with dull ochraceous; wing-coverts grayish brown sharply edged with white; *speculum and boundaries as in male*; no solid black on upper tail-coverts and crissum,—fuscous or brownish and whitish instead. Length 18.00-22.00 (457.2-558.8); wing 10.50 (266.7); tail 3.00-4.50 (76.2-114.3); bill 1.50 (38.1); tarsus 1.56 (39.6).

Recognition Marks.—Under Mallard size; white "pate" and green head-patches of male; *white of middle and greater wing-coverts*; speculum diagnostic. Head *not* cinnamon-red, as distinguished from *M. penelope* (H.).

Nesting.—*Nest*: on the ground near water; well constructed, of grasses, lined with feathers. *Eggs*: 8-12, buffy white. Av. size, 2.00 x 1.50 (50.8 x 38.1). *Season*: c. June 1st; one brood.

General Range.—North America from the Arctic Ocean south in winter to Guatemala and Cuba. Breeds chiefly north of the United States.

Range in Washington.—Common winter resident and migrant thruout the State—probably the commonest of the Anatinae west of the Cascades. A few remain to breed in the interior.

Authorities.—Baird, Rep. Pac. R. R. Surv. IX, 1858, p. 784. T. C&S. L^t. Rh. D^t. J. B. E.

Specimens.—(U. of W.) Prov. B. E.

ONE of our best-known ducks is the Baldpate, much more commonly called the American Widgeon. During fall, winter, and spring it is the most numerous of all ducks in Washington, save possibly the Bluebills and Scoters. Large numbers of them congregate upon the tide flats of Puget Sound, and the bird is abundant also on the interior waters. Constant persecution, however, has greatly reduced their ranks, as is the case with the entire duck family, and possibly for this reason their migratory habits have undergone a marked change. Eight or ten years ago they used to appear in enormous flocks during the first week in October, at which period I have seen on the Nisqually Flats, near Tacoma,

what was estimated at about five hundred thousand, all in the air at one time. For the past two or three years, however, no Widgeon to speak of have appeared before November or December, and then in such greatly reduced numbers as to



Taken in Spokane County.

Photo by the Author.

SILVER LAKE, A WELL-KNOWN DUCK SWAMP.

give rise to serious fear, not only as to the abundance, but as to the existence of future generations.

Almost strictly vegetarian as to diet their food in fall and winter consists of seeds, water-weeds, soft roots, and an occasional insect, thus making them more desirable as table birds than the average duck. In late January and February, however, they confine their feeding largely to the water-soaked fields, digging up the young grass with their bills and eating roots and all. At this season they are, with the single exception of the Pintail, perhaps the most deliciously flavored of our Washington ducks.

Widgeon are prime favorites with every sportsman, largely because they are so willing to come in and visit a few well-placed wooden decoys. So

sociable is the bird's disposition, that a lone Baldpate will often return to the decoys after several shots have been fired at him. Their bump of curiosity is also unquestionably developed to an abnormal extent, for I have crawled to within a couple of hundred yards of a flock and lured them up to within ten yards of me simply by lighting a pipe and puffing a cloud of smoke into the air at short intervals.

Their principal call is a lisping, throaty whistle, repeated three times in quick succession. It is surprisingly light in character for the size of the bird, and serves to confirm the bird's position on the list next to the Teals. Altho quite impossible to describe, the note is rather easily imitated when heard a few times, and frequently proves a valuable addition to the repertoire of the wild-fowl hunter. The only other note I have heard them utter is a low, short chattering, somewhat resembling that of the Pintail, but greatly reduced in volume. Their quacks, or squawks, of alarm also express the limit of terror, but are still pathetically inadequate in comparison with those, say, of a hen Mallard.

Altho these birds remain in the Puget Sound country until late in May, it is very doubtful if any raise their young. In the lake region of the central part of the State, however, they occur in limited numbers during the breeding season, and it is practically certain that they nest there, altho no eggs have actually been reported.

Hunters should carefully examine all of these birds that they kill, for, if one is found with the head largely suffused with red-brown, it is unquestionably the European Widgeon, a very rare visitor from across the ocean.

J. H. BOWLES.

No. 310.

GREEN-WINGED TEAL.

A. O. U. No. 139. *Nettion carolinensis* (Gmel.).

Synonym.—AMERICAN GREEN-WINGED TEAL.

Description.—*'dult male:* Head and upper neck bright chestnut, blackening on chin; darker on forehead and crown, with a glossy green patch from and including eye to nape, usually separated from chestnut below by a narrow white line which is sometimes traceable to bill; a short occipital crest velvety purplish black; a crescentic white patch on side of breast before wing; sides of breast and sides, back, and scapulars continuous with narrow cervical collar, black and white in fine wavy bars or vermiculations; fore-neck and breast brownish buff, fading to silky white or buffy on belly, heavily marked anteriorly with round spots, more or less concealed, or not, according to age and season (?); wing-coverts, inter-scapulars, tertiaries, rump, and posterior parts, slaty gray or fuscous with an oli-

vaceous or ochraceous tinge; speculum shining green, velvety purplish black on outer feathers, bounded in front by chestnut or fawn tips of greater coverts, behind narrowly by white, and on inner margin by abrupt black of outer tertiary; crissum velvety purplish black with a partially enclosed creamy or buff patch on either side; bill livid black; feet and legs dusky bluish; iris brown. *Adult female*: Speculum substantially as in male; no other trace of pattern of male save white patch on side of crissum; upperparts brownish dusky tinged with greenish and edged with lighter; head and neck dusky brown, streaked with ochraceous above, elsewhere pale buffy, speckled with dusky; breast and sides brownish dusky, ochraceous-brown, and whitish, the former in crescentic and U-shaped markings, and the whole suffused with brownish buffy; belly and crissum pale buffy or brownish buffy, obscurely spotted and streaked with darker. Length 12.50-15.00 (317.5-381); av. of six males: wing 7.08 (179.8); tail 2.63 (66.8); bill 1.48 (37.6); tarsus 1.19 (30.2).

Recognition Marks.—The smallest duck; chestnut and green head of male; black and shining green speculum, with size, distinctive.

Nesting.—*Nest*: on the ground, of weeds and grasses, lined with feathers and down. *Eggs*: 6-8, rarely 10-12, greenish buff or buffy white. Av. size, 1.82 x 1.27 (46.2 x 32.3). *Season*: c. June 1st; one brood.

General Range.—North America, breeding chiefly north of the United States, and migrating south to Honduras and Cuba.

Range in Washington.—Common migrant and less common winter resident on East-side and West-side,—a rare breeder in the interior.

Authorities.—Baird, Rep. Pac. R. R. Surv. Vol. IX, 1858, p. 778. T. C&S. L², Rh. D¹, Kb. D², Kk. J. B. E.

Specimens.—U. of W. P¹. Prov. B. E.

AROUND the lodge-fire sportsmen are much given to discussing the relative swiftness on the wing of their feathered game, and what question is more common than, "How far do you lead a cross-quartering teal duck that is late for an engagement and flying with the wind behind him?" This query shows that the Teals are put in a class by themselves so far as speed is concerned, and truly their exhibitions of flight border on the sensational. Moving at a rate of certainly not less than one hundred miles an hour, the evolutions of a large flock of these birds are truly startling. They fly in such close order that one would think their wings must interfere, even on a straight course; yet of a sudden the whole flock will turn at a right angle, or wheel and twist as if it were one bird. The looker-on can only wonder what the signal may be which is given and obeyed to such perfection, for the least hesitation or mistake on the part of a single bird would result in death or a broken wing to a score.

Unless the flocks are greatly reduced by shooting, these birds seldom travel alone, being most often seen in companies of from half a dozen to sixty or seventy. They love to feed upon the insects left in the mud by the receding tide, or in the shallows of the fresh water marshes. In the latter places they dig their bills amongst the grass and mud beneath the surface in

the ludicrous manner common to all the pond and river ducks. Literally standing on their heads, with only the lower half of the body above water, the tail is left to point straight skyward, while the little feet kick the water most vigorously in order to maintain a correct balance.

The State of Washington is fortunate in being very liberally supplied with this representative of the Teal Family. During fall, winter, and spring, it is one of our commonest ducks, arriving from the North in large numbers early in October. By the first of April nearly all have left again for the breeding grounds in the North; but occasional flocks are seen so early in the fall that it is fair to speculate upon the possibility of a few pairs remaining to rear their young within the borders of our State.

The only call note of the Teal I have ever heard is a miniature "quack," and this is given only by the female. It is similar to the call of the Mallard, but of course, is constructed on a very much smaller scale.

Green-winged Teals are prime favorites with sportsmen on account of their invariable fitness for the table, for their difficulty as marks on the wing, and for their readiness to come in to a decoy. This last trait only too often leads to their undoing, for they are so sociably inclined that, when flying singly or in small flocks, they are always ready to pay a visit to any kind of ducks or geese, be they feathered or wooden.

J. H. BOWLES.

No. 311.

BLUE-WINGED TEAL.

A. O. U. No. 140. *Querquedula discors* (Linn.).

Description.—*Adult male*: Forehead and crown (narrowly) and region about base of bill bright blackish; a large white crescent on side of face before eye; rest of head and upper neck warm plumbeous, with metallic, wine-purple reflections (like the plumage of certain doves); fore-neck and entire underparts to crissum, including lengthened feathers of sides (nearly meeting across back when wings are folded) purplish-vinaceous or purplish-chestnut, heaviest on breast, paling laterally, spotted on crop and sides, and barred on breast, belly, and longer flank feathers, with blackish; upper back and scapulars greenish fuscous, with narrow and elongated V-shaped markings of vinaceous-cinnamon; inner scapulars and tertiaries, narrow and elongated, greenish dusky, striped with vinaceous-cinnamon; lower back and behind nearly plain dusky; crissum and tail externally blackish; flanks white; wing-coverts and outer webs of outer scapulars and tertiaries a beautiful light grayish blue; speculum shining bronzy green (not so bright as in *Nettion carolinensis*, more "sickly") with dusky on either side, and bordered in front by broad white tips of greater coverts; axillars and lining of wings mostly white; bill grayish black; feet dingy yellow with dusky webs and claws; iris brown. *Adult female (and male in summer)*: Wing substantially as before, or greater coverts not so extensively white-tipped; no other indication

of prime pattern; head, neck, and underparts dull buffy or pale brownish buff; the first two finely streaked, save on chin and upper throat, the last variously spotted and marked with dusky, lightening on belly; back and scapulars brownish dusky, blackening on longer feathers, narrowly edged with light brownish. *Young*: "Similar to adult female, but whole belly immaculate, and speculum dull grayish brown without metallic gloss" (Ridgw.). Length 14.50-16.00 (368.3-406.4); av. of six males: wing 7.34 (186.4); tail 2.60 (66); bill 1.60 (40.6); tarsus 1.20 (30.5).

Recognition Marks.—"Teal" size; white facial crescent of male; grayish blue wing-coverts distinctive (except from the following which is otherwise quite different).

Nesting.—*Nest*: of grasses, etc., lined with feathers, on the ground. *Eggs*: 6-12, greenish white, or dull buffy. Av. size, 1.80 x 1.28 (45.7 x 32.5). *Season*: c. June 1st; one brood.

General Range.—North America in general, but chiefly eastward; north to Alaska, and south to the West Indies, Lower California, and northern South America. Casual in California. Breeds from Kansas and southern Illinois northward.

Range in Washington.—Not common summer resident and migrant east of the Cascades; rare or casual during migrations on the West-side.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Coues, Vol. II. p. 195.] ["Blue-winged teal," Johnson, Rep. Gov. W. T. 1884 (1885) 23.] **Rhoads**, Auk, X. Jan. 1893, p. 17. Rh. B. E.

Specimens.—Prov. E?

THIS little duck, known sometimes as the White-faced Teal, is among the rarest of our Washington water-fowl. Altho somewhat larger than the Green-wing, it is not so cold-proof as that hardy little bird, for at the first intimation of winter every Blue-wing promptly leaves for a more balmy climate. Early October is as late as we are likely to find them in the fall, and they seldom return to us from the South much before the middle of the following April. At these seasons a very few may be found in our fresh-water marshes and inland ponds, for this Teal is not a lover of salt water and is seldom to be found in its vicinity.

In the eastern states where they are common, they find equal favor in the eyes of sportsmen with the Green-wing. Like that bird they are always ready to come in to a decoy of any kind, and are equally desirable as an addition to the menu. The call note is very similar to the "quack" of the Green-wing; and, in fact, their habits are so largely the same that a detailed account would be a mere reiteration.

It is highly probable that a few pairs remain in the eastern part of our State to raise their young, for birds seen at Moses Lake late in May would lead us to that supposition. From North Dakota northward these birds are common summer residents, and during the season of reproduction they seem to lose all sense of fear. A favorite location for the nest is in the long grass

close to a railroad track, some nests having been found that were placed only six or eight feet away from the rails. Just what whimsical notion induces this habit it is difficult to say, but the thunder of the engines and cars does not seem to bother her duckship in the least, for she sits placidly upon her eggs in utter disregard of passing events. Perhaps it is a case of the Wren's nesting in the scarecrow's pocket.

J. H. BOWLES.

No. 312.

CINNAMON TEAL.

A. O. U. No. 141. *Querquedula cyanoptera* (Vieill.).

Synonym.—RED-BREASTED TEAL.

Description.—*Adult male*: Entire plumage except back and wings, rich chestnut, darker on head, darker and duller on belly, darkest, almost black, on crissum; back and inner scapulars warm dusky, margined with cinnamon or lighter, inner and middle wing-coverts (the latter overlapping and nearly concealing the greater coverts), and the outer webs of outer scapulars and tertials beautiful light grayish blue; speculum lustrous green, bounded on sides by dusky and in front, only in part, by white tips of greater coverts; axillars white; under wing-coverts white and dusky; bill black; feet and legs orange; iris orange. *Adult female (and male in post-nuptial plumage)*: Similar to corresponding plumage of *Q. discors*, but darker; more of the throat and sometimes chin speckled; underparts with at least a tinge of the peculiar chestnut color; averaging larger. Length 15.50-17.00 (393.7-431.8); wing 7.45 (189.2); tail 2.90 (73.7); bill 1.80 (45.7); tarsus 1.32 (33.5).

Recognition Marks.—Large Teal size; heavy chestnut coloration of male distinctive. Females and young require careful discrimination from *Q. discors*; see above.

Nesting.—*Nest*: in grass or heavy weeds near water, of grass and scanty trash, copiously lined with slaty down. *Eggs*: 9-12, usually 10 or 11, creamy white or pale buff, smooth, "oily" surface. Av. size, 1.87 x 1.41 (47.5 x 35.8). *Season*: May 20-June 15; one brood.

General Range.—Western America from British Columbia south to Chili, Patagonia, and Falkland Islands; east in North America to the Rocky Mountains and southern Texas; casual in the Mississippi Valley and Florida.

Range in Washington.—Common summer resident east of the Cascades only.

Authorities.—[Cooper and Suckley, Rep. Pac. R. R. Surv. Vol XII, pt. II, 1860, p. 254; "Ft. Dalles," (Ore.). Not a valid Washington record.] *Anas cyanoptera*, Dawson, Ank, Vol. XIV, Apr. 1897, p. 171. D², J.

Specimens.—U. of W. Prov.

OF more than sixty species of the *Anatidæ* (Ducks, Geese and Swans) found in North America, one only is peculiar to the western United States, viz., the Cinnamon Teal. It is a matter of satisfaction, therefore, that our western champion is such a handsome fellow. Surely no more alluring spectacle could be afforded the sportsman or nature-lover, than that of a flock of these brilliant chestnut-colored ducks when they rise suddenly from a way-side pond at break of day. It is as tho fragments of the rich red earth, from which we are all made, had been startled by the impact of the sun's rays upon the water, and were fleeing toward heaven—earth, air, fire, and water, all in one burst of momentary splendor.

It is only idle folk, however, who can afford finery, and since it is the drake who has nothing to do, he wears all the fine clothes. The female, save for her blue-gray wing-patches, is the plainest-looking body imaginable, and she so closely resembles the female of *Q. discors* that we seriously wonder if their own mates can always distinguish them. I have seen Blue-wings and Cinnamons associating together during the mating season, and the males appeared to regard each other with jealousy, as tho they really feared confusion of brides.

A favorite play on the part of these Teal at mating time is leap-frog. A bird will vault into the air and pass over another's head and down again with a great splash; whereupon the other, as likely as not, will return the compliment. This passage occurs oftenest between two males, and does not appear to have any unfriendly motive.

So demure and unobtrusive are these birds at nesting time that one is likely to underestimate their numbers, unless he sets about it in systematic fashion to discover their nests. This may be done best of all by "dragging"; that is, by holding a long rope at each end and sweeping it across a weed-patch or a low-lying meadow. The bird flies from under the rope in great terror, but is never, in our experience, so frightened that she will not return. In this way we located twenty nests along a certain stream in Douglas County, where we should not have expected half that number.

Our purpose was study rather than collection, and the most striking fact which our observation disclosed was the number and variety of the birds' enemies at nesting time. Nest after nest was rifled by the prowling vermin that housed in the river-bank. Once as I was crossing a luxuriant stretch of herbage a foot or more in height, I came upon two broken egg-shells of a Cinnamon Teal. A little search disclosed the nest about six feet away and a glance revealed the tragedy which had been enacted on the previous night. The grass tussock which sheltered the nest gaped open and the dark down was scattered. A befouled and broken egg bore sad testimony to the mortal fright of the mother bird, altho none of the remaining six were broken. A bit of blood on the down showed that it was the bird rather than the eggs the

miscreant was after; and her I found dead upon her back some six feet away. There was a sharp wound over the heart—no other mark of violence—and dissection showed that altho the heart itself had not been pierced, the neighboring blood vessels had and the blood exhausted. One shudders to think of the



Taken in Douglas County.

Photo by the Author.

NEST AND EGGS OF CINNAMON TEAL.

FROM A WATER-COLOR BY ALICE BROWN

ABOUT THE MIDDLE OF THE

SHOOTERS

1880

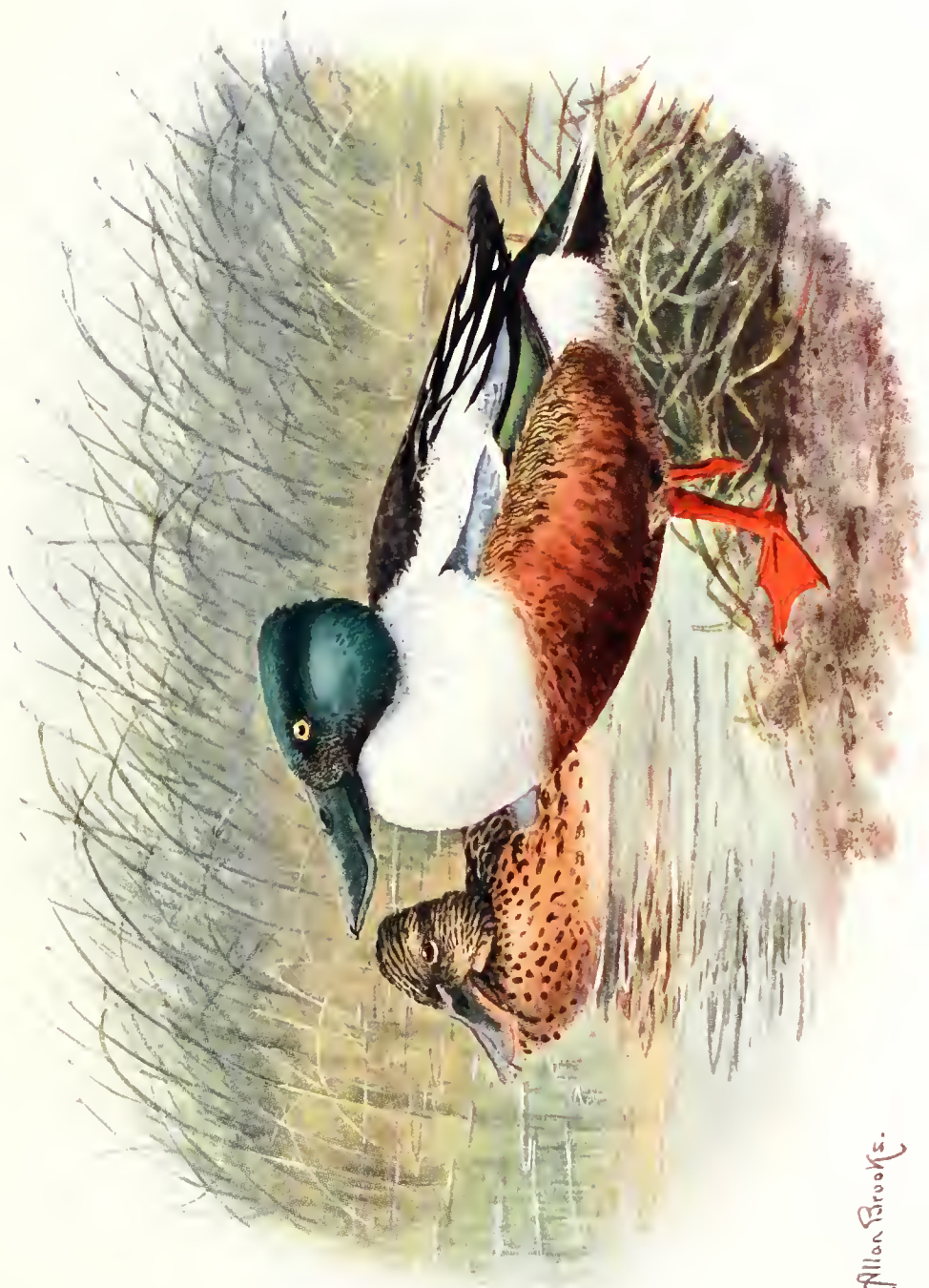
THE
LIBRARY OF THE
MUSEUM OF COMPARATIVE ZOOLOGY
AT HARVARD UNIVERSITY
Cambridge, Mass.
1900



SHOVELLERS

ABOUT 1/3 NATURAL SIZE

FROM A WATER-COLOR PAINTING BY ALLAN BROOKS



Allan Brooks.

nightly heart-break among the brooding birds where minks and weasels, skunks, rats, otters, badgers, coyotes, and raccoons are allowed to roam. Of twenty-eight ducks' nests (of all species) examined in this neighborhood, only four remained unmolested at the close of our two weeks' stay. Obviously, if we are to protect our ducks, certain other natural features must be eliminated.

No. 313.

SHOVELLER.

A. O. U. No. 142. **Spatula clypeata** (Linn.).

Synonyms.—SPOONBILL. SPOON-BILL DUCK. BROAD-BILL.

Description.—*Adult male*: Head and neck sooty black, overlaid, especially above, with glossy green and glancing metallic blue or purple; lower neck and fore-breast pure white; lower breast, belly, and sides purplish chestnut, the longer side-feathers dusky-barred; back, narrowly, greenish dusky, becoming greenish black on rump and behind, and glossy green on sides of upper tail-coverts; crissum black, separated from belly anteriorly by white, finely undulated with dusky; white flank-patches; inner scapulars white, and inner tertiaries white-striped; wing-coverts and outer webs of outer tertiaries light grayish blue; the posterior row of coverts greenish dusky at base, broadly white-tipped; speculum glossy green bounded on either side by dusky; primaries dusky; axillars and lining of wing white; bill spatulate, the upper mandible much broader at tip than lower and enclosing it; lamellæ prominent, deep black; feet orange-red; iris brown. *Adult female*: Wings much as in male, but duller; scapulars like back and tertiaries not striped; upperparts, except head and neck, plain fuscous glossed posteriorly with greenish; remaining plumage buffy or buffy white, spotted with brownish fuscous; head and neck narrowly streaked with dusky; lower breast tinged with brownish; bill brown above, orange below. *Young male*: Like adult female but colors heavier, and belly tinged with chestnut. *Young female*: Similar to adult but wing-coverts dull slaty gray, only faintly tinged with bluish or greenish; speculum not so extensively glossy green. Length 17.00-21.00 (43.8-53.4); wing 9.00-10.00 (22.8-25.4); tail 3.00-3.50 (7.6-8.9); culmen 2.50-2.90 (6.3-7.3); breadth of bill near tip 1.20 (.30.5); tarsus 1.50 (.38.1).

Recognition Marks.—Smaller than Mallard; bill broadened at tip distinctive; male with white breast and rich chestnut belly.

Nesting.—*Nest*: on the ground in or near swamp, lined with weed-stalks and grasses, or reeds. *Eggs*: 6-10, pale bluish or greenish gray. Av. size, 2.12 x 1.48 (53.9 x 37.6). *Season*: first week in June.

General Range.—Northern hemisphere. In North America breeding from Alaska to Texas; not abundant on the Atlantic Coast north of the Carolinas.

Range in Washington.—Common migrant and winter resident on Puget Sound; not uncommon migrant and summer resident east of the Cascade Mountains.

Authorities.—Cooper and Suckley, Rep. Pac. R. R. Surv. XII. pt. II. 1860, p. 255. T. C&S. Rh. Kk. B. E.

Specimens.—U. of W. Prov. B. E.

ONE glance at the long, broadly spatulate bill of the "Spoonbill," or Shoveller, is quite sufficient to establish the bird's identity in the mind of any one who has ever even heard one of its names. This huge bill not only gives its owner a top-heavy appearance, but gives the impression of a larger bird than the measurements warrant. The bird is rather less of a vegetarian than most of its kind. It eschews grain, and is not so partial to water-cresses and succulent browse as are Mallards and Widgeon. The roots of aquatic plants



Taken in Spokane County.

Telephoto by W. H. Wright.

FEMALE SHOVELLER.

are eaten, but insects, tadpoles, snails, and small fish are a preferred diet. Much of the bird's food is secured in the shallow water or mud, which is scooped up liberally and sifted thru the lamellæ of the beak until only edible portions are retained. In spite of this diet the Shoveller's flesh is seldom or never "fishy," and so far as flavor is concerned it makes a welcome addition to the table.

For some unknown reason Shovellers seldom become very fat, as do most other ducks; and they are not on this account very much sought after by sports-



Taken in Douglas County.

Photo by the Author.

NEST AND EGGS (UNDISTURBED) OF THE SHOVELLER.

men. Their most striking characteristic from the hunter's standpoint is curiosity—this and artless innocence. If there is anything unusual going on in the swamp, the Shoveller wants to see. It is, therefore, the easiest of birds to decoy. Once when Mr. Bowles's dog was retrieving a duck in open water, a drake Shoveller came flying up, noted something interesting, and settled promptly within a foot of dog and bird. However, if frightened, or on a flyway, it requires a good shot to bring a Shoveller to bag, as it is almost as swift awing as any of the teals.

The plumage of this duck is very handsome, and some of its features are of special interest to the bird-student. Thus the markings of the drake combine in a striking degree the essential characters of both the Mallard and the Blue-winged Teal. Its head is of iridescent green, its lowerparts are chestnut, and its feet red,—all characteristic of the male Mallard—while its wing is practically an enlarged edition of the drake Blue-wing. The bird's eye, moreover, is golden, like that of the genus *Clangula*, and in its striped scapulars as well as in the pattern of coloration on flanks and tail-coverts the bird recalls the lordly Pintail.

The nesting of the Shoveller is not differentiated from that of a half dozen other river ducks, which resort to lowland meadows and weedy areas adjacent to swamps. Ten or eleven eggs, buffy as to hue, with a greenish cast, are placed in a grass-lined depression on the ground; and when the set nears completion an abundance of dark down is provided, both to retain the parental warmth, and to screen the eggs from observation in the owner's absence. One curious fact came to light in the course of last season's nesting; namely, the dependence of the ducks upon the presence of Meadowlarks. We found that the close proximity of these two very diverse species was no chance coincidence, but a very practical rule, insomuch that whenever, in dragging, we flushed a Meadowlark, we said, "Now look for the duck's nest." Once, before we had discovered this rule, we put up a Shoveller from two eggs and marked the spot with a bit of string tied to a neighboring weed. Returning four days later and dropping carefully to my knees before the string-tied cluster, I stretched out my hand to part the thick grasses. From exactly beneath the hand, with a yip of terror, flew a Meadowlark from six eggs. Talk of the continuity of Nature! Here was a manifest exception. Six eggs I had expected, but not Meadowlarks! What pixie of the meadows had been tricking me? It was not till the day following that I returned with renewed courage to resolve the riddle. The Shoveller's eggs, now cleverly concealed by down, were just twelve inches away from those of the Meadowlark. Evidently, the Duck seeks association with the Lark; this not so much with a view to congenial company, as in order that she may be warned of the approach of danger. Perhaps it is the male Lark whose advice she plans to follow, in view of the fact that her natural protector, the gay drake, will desert as soon as she begins to brood.

No. 314.

PINTAIL.

A. O. U. No. 143. *Dafila acuta* (Linn.).**Synonyms.**—SPRIG-TAIL. SPIKE-TAIL.

Description.—*Adult male*: Head and upper-neck hair-brown, darker or warmer brown on top of head, with faint greenish or wine-purple iridescence on sides of occiput; a narrow white stripe from occiput obliquely backward and downward to join white of breast; enclosed space on hind-neck blackish; fore-neck, breast and belly white, faintly dusky-barred on lower belly; hind-neck, back, sides of breast, and sides finely wavy-barred dusky and white; posterior scapulars and tertiaries lanceolate, heavily striped, broadly with black, more narrowly with buffy white, light brownish gray, and fuscous; rump and behind with mesial brownish dusky and obscure wavy-barring of fuscous and whitish; central pair of tail-feathers much elongated, blackish or with metallic reflections; crissum white, separated from belly by dull white area and broad flank patches; wing-coverts plain brownish gray, the posterior row tipped with cinnamon-rufous; speculum dull bronzy green or faintly glossy with dusky on either side, and bordered behind by black and terminal white; axillars white with a little mottling of light grayish brown; lining of wings mottled brownish gray and white; bill black, edged with grayish blue; feet and legs grayish blue; iris brown. *Adult female*: Obscurely colored; pale ochraceous or whitish on belly; ochraceous-buff or brownish buff on remaining underparts; much darker, nearly cinnamon-brown on crown; head and neck finely streaked with dusky, except occasionally on upper throat; breast variously spotted and streaked; sides with large irregular U-shaped markings of brownish dusky; upperparts dusky or greenish fuscous, lightly or heavily marked and striped with dull ochraceous or ochraceous-buff; wing much duller than in male, altho pattern traceable; wing-coverts fuscous, narrowly white-edged and tipped; the tips of posterior row scarcely broader, white; speculum dusky with faint purplish and greenish gloss; axillars more heavily mottled with grayish brown. *Adult male in breeding plumage*: Similar to adult female, but wing as in ordinary plumage (Ridgw.). *Young male*: Like adult female but more ochraceous below and more uniformly streaked; slightly transverse-barred above, and wing early showing adult characteristics. *Young female*: Similar to adult, but more heavily tinged below, and more heavily streaked and striped above; *speculum light brown* dappled with dusky. Adult male length 26.00-30.00 (660.4-762); wing 10.60 (269.2); tail 6.25-9.50 (158.8-241.3); bill 2.10 (53.3); tarsus 1.70 (43.2). Females average smaller;—tail 4.00-5.00 (101.6-127).

Recognition Marks.—Mallard size or less; lengthened tail-feathers of adult male; head hair-brown; fore-neck and below white (adult male). The female and young of this bird present difficulties. Look first for the wedge-shaped tail, and top of head suffused with cinnamon-brown and heavily streaked with blackish; then eliminate other species by careful attention to speculum and wing-coverts.

Nesting.—*Nest*: on the ground, usually in a bunch of tall grass not far from water. *Eggs*: 8-12, pale greenish gray or buffy white. Av. size, 2.20 x 1.48 (55.9 x 37.6). *Season*: June 1-10; one brood.

General Range.—Northern hemisphere. In North America breeding chiefly north of the United States, but irregularly south in the West to Arizona, etc.; south in winter thruout the United States to Cuba and Panama.

Range in Washington.—Common winter resident and early spring and late fall migrant, especially on Puget Sound. Breeds sparingly in the interior.

Authorities.—Baird, Rep. Pac. R. R. Surv. IX. 1858, p. 777. T. C&S. L². Rh. Kb. B. E.

Specimens.—(U. of W.) Prov. B. BN. E.

REGARDED from any view point save that of familiarity, the Pintail deserves to head the list of River Ducks (*Anatinae*). The Mallard is the contemporary ancestor of the domestic duck, and as such is perhaps entitled to first consideration; but the Pintail is the epitome of all that makes ducks interesting. He is as handsome as any (save the Wood Duck, who is a professional beauty), and to the splendor of a handsome color-pattern he adds both



Taken in Oregon.

Photo by H. T. Bohlman and W. L. Finley.

PINTAIL DUCK ON NEST.

a sinuous gracefulness of movement and a bearing of conscious quality. Mark him sitting high on the water, reflecting the morning sun from his snowy breast, swaying the mobile neck in sagacious scrutiny, and raising the slender, tapering tail aloft like an

ensign, and if the phrase "lordly Pintail" occurs to you, it will never be discarded.

Pintails are wary birds, and when mingling on the water with other species are usually the first to give the alarm. Being of a sociable nature, and also fastidious as to personal appearance, they spend a good deal of time on shore preening their feathers and gabbling amiably, or else napping. Here, by

the exercise of proper precautions, they may be stalked; and owing to their habit of bunching closely when taking to wing, a second barrel may be even more destructive than the first. As single winged targets, they are among the most difficult, as their flight is extremely swift, perhaps the most rapid of any of the ducks.

At the mating season the Pintails delight to exhibit their volatorial powers. A *bravo* will climb the heavens in sheer exuberance of spirit, and then descend on stiffly outstretched and down-curved wings at a breakneck speed. As he nears the ground, he shifts the angle slightly, and shoots over the surface like a meteor, challenging as he passes, with a wing-rush which leaves the beholder almost dazed. The female sometimes participates in these aerial excursions, and enjoys the sport as well as her consort. Nelson tells of such a pair which attracted his attention in the lower Yukon country: "Back and forth they passed at a marvelously swift rate of speed, with frequent quick turns and evolutions. At one moment they were almost out of view high overhead, and the next saw them skimming along the ground in an involved course very difficult to follow with the eye. Ere long a second male joined in the chase, then a third, and so on until six males vied with each other in the pursuit. The original pursuer appeared to be the only one capable of keeping close to the coy female, and owing to her dextrous turns and curves he was able to draw near only at intervals. When ever he did succeed he always passed under the female, and kept so close to her that their wings clattered together with a noise like a watchman's rattle, and audible a long distance. This chase lasted half an hour, and after five of the pursuers had dropped off



Taken in Oregon.

Photo by Bohlman and Finley.

YOUNG PINTAILS.

one by one, the pair remaining (and I think the male was the same that originated the pursuit) settled in one of the ponds."

Pintails are common with us only in winter, and they are the first of the River Ducks to move northward in the early spring. While they are lovers of fresh water, and prefer the secluded lakes and pools of the interior, they are of regular occurrence on salt water during the migrations, and are most in evidence on Puget Sound in February, when the northward movement is under full headway. They nest chiefly north of our borders and are counted the most abundant breeding River Ducks in western Alaska. A few, however, remain to breed in eastern Washington. We found a nest at Brook Lake, which, having escaped the mower, fell a victim to the horse-rake, so that only seven of ten eggs were spared us.

The young after hatching are kept in the most secluded depths of the swamp, and it was a very lucky chance which placed two of these promising youngsters in the benevolent clutches of Messrs. Finley and Bohlman, on Tulé Lake in southern Oregon. A bird on the photographic plate is worth two on the dinner plate, but the flavor of the Pintail is so delicious that one might be pardoned for desiring both.

No. 315.

WOOD DUCK.

A. O. U. No. 144. *Aix sponsa* (Linn.).

Synonyms.—SUMMER DUCK. "THE BRIDE."

Description.—*Adult male*: Of almost indescribable elegance; head, crested, metallic and iridescent green, purple, violet, and black; a white line from angle of upper mandible along crown, and another backward from behind eye, both continued in the feathers of the large occipital crest; throat white, sending up two transverse bars on either side on cheek and hind-neck; fore-neck and breast rich chestnut, glossed with purplish on sides of breast, and marked centrally with triangular white spots, which increase in size backward; belly broadly white; sides warm fulvous, minutely waved with black, the tips of the outermost feathers with broad crescentic bars of black and white; chestnut of breast and fulvous of sides separated by two transverse bars, the front one white, the hinder black; upperparts chiefly sooty or velvety black with metallic reflections of blue, purple, green, and bronze; the anterior and marginal coverts and base of primaries (all mostly concealed) plain fuscous; exposed tips of primaries silvery white, on outer web tipped with metallic blue; secondaries white-tipped, the exposed webs metallic; crissum sooty-brown with metallic gloss; flank-patches intense purplish chestnut; axillars and lining of wings white, spotted or barred with dusky; "bill (in life) beautifully varied with jet-black, milk-white, lilac, red, orange, and yellow; legs and feet orange, claws black; iris and edges of eye-lid red." *Adult female and young*: Crest only faintly indicated; top of head purplish brown

with faint metallic reflections; throat and space about eye (extending backward to occiput) and some feathering about base of bill, white; rest of head ashy brown; upperparts much as in male but duller, chiefly warm brown in place of black; fore-neck and breast brown, streaked with lighter or dull ochraceous; belly white; crissum mixed fuscous and white. Length, adult male: 19.00-20.50 (482.6-520.7); wing 9.15 (232.4); tail 3.88 (98.6); bill 1.30 (33); tarsus 1.36 (34.5). Female, length: 17.00-19.25 (431.8-480); other dimensions in proportion.

Recognition Marks.—Smaller than Mallard. Exquisitely variegated plumage of male unmistakable; female unlike that of any other species.

Nesting.—*Nest*: in a hollow tree, lined with twigs, grasses, and down. *Eggs*: 8-14, buffy white. Av. size, 2.05 x 1.55 (52.1 x 39.4). *Season*: c. May 20; one brood.

General Range.—Temperate North America, breeding thruout its range. Cuba. Accidental in Europe.

Range in Washington.—Formerly common summer resident and migrant. Now rare thruout the State save on islands of lower Columbia where still abundant.

Authorities.—Newberry, Rep. Pac. R. R. Surv. VI. pt. IV. 1857, p. 102. T. C&S. L. Rh. Kk. B. E.

Specimens.—(U. of W.) Prov. B. BN.

FEW if any more exquisitely beautiful creatures have been fashioned in the workshop of Nature than the Wood Ducks of America. Among the Ducks, certainly, only the Mandarin (*Aix galericulata*) of China, a near relative, may vie with this species in brilliancy of coloring and delicacy of mould. Linnaeus called the Wood Duck the Bride (Latin, *sponsa*, bride) but, of course, it is the *bridegroom* who wears the jewels and inherits the products of Oriental dye-stuffs, bequeathed thru a thousand generations; for, Males must strut and females must work, is the rule among ducks as among most other birds. Literally all the colors of the rainbow belong to this bird in his nuptial plumage, with black and white thrown in for good measure. And with all this gaudy attire go many accomplishments not attained by any others in the group.

Birds of this species frequent secluded swamps, bayous, and sheltered water-ways. They are swift and graceful fliers, and they are able to traverse the mazes of the forest with the ease of pigeons. They perch readily upon the branches of trees, and even walk along them without hesitancy. To the aquatic fare offered by the surface and depths of woodland pools, is added the flying insects of the forest home, and the tender shoots and leaves of plants in spring. Acorns are a favorite food in fall, and upon these the birds sometimes stuff themselves to repletion.

Most curious are the nesting habits, with which our fathers in some of the older States were almost as familiar as we are with those of Robins. The birds arrive mated in early spring, and in later April, May, or early June, according to latitude, a site is chosen in the hollow of a broken branch of a

tree, in a large deserted Woodpecker hole, or in a central hollow of some tree to which admission may be gained thru a crevice. Those holes which overlook water are preferred, but in the absence of these the bride and groom will sometimes take up residence a half a mile from the nearest swamp or stream. Within the chosen hollow, from eight to seventeen eggs, "resembling old polished ivory," are placed on a cushion of grasses, leaves, feathers, and down. Occasionally the entrance to the hole is so narrow that the female in visiting her eggs is obliged to spend some time in squeezing thru. As the female sits for four weeks, the male mounts guard in a neighboring tree and apprises her of approaching danger by a strange cry, "*oe-ck*," like the crowing of a young cock.

When the young are hatched, they instinctively scramble to the mouth of the hole and tumble out, or are urged out by the mother, falling either into the receptive water, or upon the carpet of leaves at the foot of the nesting tree. If the distance is too great, the mother will carry the youngsters to the ground in her bill one at a time, until all are out, and then lead them to the nearest water.

Mr. J. W. Edwards, a well-known pioneer of Seattle, informs us that a Wood Duck nested yearly, until recently, in an old maple stub on the banks of Squawk Slough near Redmond. The nesting cavity was about eighteen feet up, and so well accustomed did the mother duck become to the attentions of her human neighbors that the school-boys built a cleat ladder up the side of the stub and took turns watching the brooding bird without causing her desertion.

Wood Ducks used to be very abundant in the Central and Southern States, but so fierce has been the gun-fire directed against them that they have been actually exterminated in many of their former haunts; and the alarm has been vigorously sounded of late by both the National Association of Audubon Societies and the Bureau of the Biological Survey at Washington, in view of the threatened *extinction* of the species. The bird is now little known in Washington, save along the southern border. Here, and especially upon the islands of the lower Columbia River, Deer Island, Sanvie's, and the rest, Wood Ducks are not only common but abundant. It is reported to us on the highest authority that members of certain shooting clubs in Portland obtain the bag-limit (now twenty-five, but until very recently fifty ducks *per day* in Oregon) of this species alone during the September shooting. In view of the bird's scarcity elsewhere, such a thoughtless course is very much to be deprecated.

The situation upon the banks of the Columbia serves again to emphasize the necessity of some national system of control. Here is a species known to be in danger of extermination, yet locally abundant in one circumscribed section. The entire nation is interested in the preservation of this bird, but the government is powerless to interfere where the local conscience is apathetic or

the danger unrealized. Until the matter is legally remedied, our appeal must be to the honor and the unselfishness, as well as to the common sense, of those who, perhaps unwittingly, occupy a position so uniquely favored. Viewed in the large the slaughter of Wood Ducks is an esthetic crime. Why should we, the people of the United States, sacrifice this jewel of the waters, which might gladden all our eyes for all our lives, for the sake of the insignificant mouthfuls of meat which only one ten-thousandth of our number could enjoy for a few seasons? The Wood Duck should be absolutely protected wherever found, and especially in those sections, the lower Columbia and the lower Fraser Rivers, where there is some real hope of saving it. Let us, if possible, ere it be too late, snatch this priceless gem of the bird world from the perdition to which we have already consigned the Wild Pigeon and the Wild Turkey!

No. 316.

REDHEAD.

A. O. U. No. 146. *Marila americana* (Eyt.).

Synonym.—AMERICAN POCHARD.

Description.—*Adult male*: Angle between culmen and forehead abrupt; head and upper-neck bright chestnut, glossed with reddish purple, mostly heavily on neck; lower-neck and breast all around (i. e. including upper back) deep glossy brownish black; belly white; rump, upper tail-coverts, and crissum sooty black; remaining plumage, except wings, and including lower belly (in fact all above the "water-line") finely wavy-barred or vermiculated dusky and white in about equal proportions; wing-coverts ashy gray speckled with white; speculum still lighter,—warm ashy gray, tipped with white; axillars entirely and lining of wings chiefly white; bill dull blue with a black belt at tip; feet grayish blue, with black claws and dusky webs; iris orange. *Adult female*: Much plainer; wing as in male; above and on breast and sides warm or dull grayish brown, more or less tipped with buffy or fulvous, the feathers of back and scapulars sometimes speckled with dusky and white on tips, according to season; darker on back and crown, lighter on sides of head and neck, especially above bill, lightening to buffy white on chin and throat; belly white; lower belly light grayish brown; crissum grayish brown and white; bill lighter than in male. *Immature male*: Like adult female but darker; feathers near base of bill, on sides only, whitish; speculum (always?) creamy white instead of ashy gray. Length 18.00-22.00 (457.2-558.8); wing 8.96 (227.6); tail 2.50 (63.5); bill 1.80 (45.7); tarsus 1.56 (39.6).

Recognition Marks.—Mallard size or smaller; chestnut head, black breast, and "canvas" back and sides of male. See distinctions under next species.

Nesting.—*Nest*: in a marsh or near water, of reeds, grasses, etc., well lined

with feathers and down. *Eggs*: 8-14, creamy white, or dull greenish buff. Av. size, 2.40 x 1.70 (61 x 43.2). *Season*: c. May 20; one brood.

General Range.—North America, breeding from California, southern Michigan and Maine northward.

Range in Washington.—Not common migrant west of the Cascades, keeping chiefly to fresh water; common migrant and summer resident on the East-side, breeding chiefly in the northern counties.

Authorities.—["Red-head duck" Johnson, Rep. Gov. W. T. 1884 (1885), 23.] Hubbard, *Zoe*, III, July 1892, p. 142. Rh. Kk. J. B. E.

Specimens.—Prov.



Taken on Moses Lake.

From a Photograph, Copyright, 1908, by W. L. Dawson.

NEST AND EGGS OF THE REDHEAD.

DAME NATURE has seen fit to distribute this handsome bird over Washington with an irregularity which seems most unaccountable. On the east side of the Cascade Range, especially among the lakes of the interior, the Redhead is one of the most numerous of the duck family. Strangely enough, however, no sooner do we arrive on the west side of the Mountains than these birds completely disappear; for the average sportsman who confines his hunt-

ing to Puget Sound and its surrounding lakes does not so much as know the bird. Personally, in an experience of twelve years, I have seen only one example in the last-named section, and this I was fortunate enough to get in a little swamp on the outskirts of South Tacoma.

Save the Ringneck, it is the only member of the subfamily to which it belongs, the *Fuligulina*, that is not partial to salt water, for it is very seldom found anywhere except among the fresh-water lakes and marshes. In appearance it is considerably like the Canvas-back, for which it is often mistaken, but one look at the head and bill should tell the story. The bill of the Redhead is low at the base of the upper mandible, while that of the Canvas-back arches high up at the base and practically makes the forehead.

As a table duck, when each is at its best, there is absolutely no choice, tho fashion has dictated that Canvas-backs should command the fancy prices. Any ducks that eat the same food are bound to taste very much the same, and as a matter of fact the Redhead is much the superior bird of the two, for the reason that it feeds only in fresh water.

They are essentially lovers of shoal bodies of fresh water, and in summer resort in considerable numbers to the larger lakes of central Washington for the purpose of rearing their young. One of their favorite breeding grounds may be found at Moses Lake, a beautiful body of water situated in the north central part of the State. At this place, in the summer of 1906, it is certain that at least one hundred and fifty pairs remained to nest. Paddling our canoe along the margin of the lake, close to its heavy fringe of cat-tails, we would flush a pair or two at intervals of every hundred feet. As is customary with all water-fowl during the nesting season, they were remarkably tame, allowing such a close approach as to give an excellent view of the handsome nuptial plumage of the male.

Leaving the canoe and plunging at random into the sea of rushes, fortune may favor us sufficiently to permit of our happening upon one of their nests. This is a heavy, deep basket of rushes, placed in the thickest of the growth, either upon a small muddy island left by the receding water, or built up amongst the flags upon the matted dead stems which cover the surface of the lake in these places. It is a structure of such beauty as to cause the bird student to pause almost breathless upon its discovery. The mother duck has heard his noisy approach long since and departed, first carefully spreading over the eggs a heavy blanket taken from the lining of the nest. This consists entirely of down of the most delicate shade of white faintly tinged with gray, which the duck plucks from her own breast. A faint glimpse only can be obtained of the twelve or fourteen greenish drab eggs which seem completely to fill the nest, but let the sun be shining brightly with the dense green rushes for a background, and be sure that fatigue, soaked clothing, mosquitoes, and a dozen other discomforts, will instantly vanish from remembrance at the sight.

In their family affairs the Redheads are somewhat eccentric, and also seem to be of rather a long-suffering disposition. Nests have been found containing as many as twenty-five or thirty eggs, which seems good evidence of the combined efforts of at least two females. They are also imposed upon by other species of ducks, which not infrequently make a foster mother of the obliging Redhead, to the extent of persuading her to hatch out and rear six or seven ducklings which are not her own.

J. H. BOWLES.

No. 317.

CANVAS-BACK.

A. O. U. No. 147. *Marila vallisneria* (Wils.).

Description.—*Adult male*: Similar to preceding species, but larger, head larger, bill longer, and no evident angle between bill and forehead; head and upper neck reddish brown without purplish gloss, blackening on crown and chin; the sides less heavily waved with dusky; the white bars of upperparts much wider than the dusky (hence entire back conspicuously lighter in tone); upper mandible dusky at base, bluish only between nostril and black tip; iris red. *Adult female*: Similar to that of preceding species, but proportioned like male; bill correspondingly different; feathers of back and scapulars more or less wavy-barred with white. The female Red-head is sparingly speckled above with dusky and whitish, but never barred. Length 20.00-23.50 (508-596.9); wing 9.00 (228.6); tail 2.90 (73.7); bill 2.35 (59.7); tarsus 1.75 (44.5).

Recognition Marks.—Mallard size; slope of culmen continuous with forehead; reddish brown head and light canvas back. For detailed comparison with *A. americana* see above.

Nesting.—*Nest*: on the ground of marshes and grassy sloughs, of grasses, etc., lined sparingly with feathers. *Eggs*: 6-10, buffy white with a greenish or bluish tinge. Av. size, 2.45 x 1.75 (62.2 x 44.5). *Season*: c. June 1st; one brood.

General Range.—Nearly all of North America, breeding from the northwestern states northward to Alaska.

Range in Washington.—West-side, rather common winter resident on salt water, found chiefly about mouths of rivers and on tide-flats; East-side, not common migrant and rare summer resident.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle: Coues, Vol. II, p. 193.] *Aythya vallisneriana*, Newberry, Rep. Pac. R. R. Surv. VI, pt. IV, 1857, p. 103. T. C&S. L. Rh. Kb. Kk. B. E.

Specimens.—(U. of W.) Prov. B. E.

TO be classed as a reference book for epicures is far from being the main object of "The Birds of Washington." However, the edible qualities of

our game-birds is a proper subject for inquiry on our part, and we are willing to testify as far as experience enables us. But as to the flavor of the Canvas-back, we are not a court of last appeal. We have never dined at Sherry's, where, we are told, the price of ducks is measured by eagles. Moreover, the "wild celery" (*Vallisneria spiralis*), which is the orthodox diet of the Canvas-back, grows in Maryland and not in Washington. On the whole, therefore, we are willing to accept the conclusions of the late Dr. Elliot Cones: "When feeding on wild celery the flesh acquires a peculiarly fine flavor, which has gained for the bird great renown among gastronomers; but its flesh is of no special excellence under other circumstances, in fact inferior to that of most River Ducks (*Anatinae*). There is little reason for squealing in barbaric joy over this over-rated and generally under-done bird; not one person in ten thousand can tell it from any other Duck on the table, and then only under the celery circumstance just said." Certainly a Canvas-back which has fed for two weeks or a month on our marine worms and crustaceans, with a few decayed salmon for relish, has little to offer a fastidious palate.

The sportsmen of Washington, however, have little need to disturb themselves as to how their Canvas-backs are going to taste, for the birds are far from plentiful at any season of the year. They seldom arrive before the middle of December, after which time they may occasionally be found in small flocks, either in our fresh water lakes, or on the open water over against our tide-flats. In the central part of the State they often remain until well into the summer, and a few pairs undoubtedly breed along the reedy margins of the lakes in that region.

The food of the Canvas-back is almost always obtained by diving, the vegetation being pulled up and the succulent roots eaten. When the birds come to the surface with bills laden with the coveted herbage, they are frequently set upon and robbed by Widgeon and other ducks, which have assembled for the purpose.

Considerable uncertainty exists as to the relative abundance of Canvas-backs and Redheads. Even in hand Redheads are often reported by sportsmen as Canvas-backs, and *vice versa*. The resemblances are striking, but the differences are unmistakable, the best single mark of distinction being the sloping forehead of the Canvas-back, without noticeable angle at the base of the bill. The back of this bird, also, is much lighter in color. Both birds, moreover, bear a striking superficial resemblance to the females of the larger Mergansers, and many a poor "Saw-bill" has fallen victim to snap judgment in this regard. The Canvas-back is a heavier bird than any of the others mentioned, for when fattened on eel-grass it may weigh as high as five or six pounds.

No. 318.

AMERICAN SCAUP DUCK.

A. O. U. No. 148. *Marila marila* (Linn.).**Synonyms.**—SCAUP. GREATER SCAUP. BLUE-BILL. SHUFFLER. RAFT DUCK. BLACK-HEAD. FLOCKING DUCK.**Description.**—*Adult male*: Head and neck black with green gloss; foreneck all around and breast rich purplish black; a collar around neck obscurely lighter; belly and sides pure white; back and scapulars vermiculate or wavy-barred black and white,—the white bars wider in front, becoming much narrower behind; tertiaries, lower back, and tail-coverts sooty black; flanks sooty brown; wing-coverts blackish, speckled sparingly on tips with white; speculum white, tipped with blackish; axillars and under wing-coverts chiefly white; bill dull blue with black nail, broadening and much hooked at tip; feet dark plumbeous and with darker webs; iris yellow. *Adult female*: Region about base of bill (least on chin) white; head and neck plain snuff brown; fore-neck and breast dark brown, edged and tipped with lighter; sides and crissum dark grayish brown, the former decidedly, the latter obscurely vermiculated with white; belly white, shading into brown marginally; upperparts brownish dusky, the tips of feathers speckled or obscurely vermiculated with white; wings, bill, etc., as in male. Length 17.50-20.00 (44.5-50.8); wing 8.65 (21.7); tail 2.90 (7.3-7); bill 1.75 (4.5); tarsus 1.50 (3.8-1).**Recognition Marks.**—Smaller than Mallard; head, neck and breast black (female brown); belly and sides white (male); bill bluish with black nail. Larger.**Nesting.**—Not known to breed in Washington. *Nest*: on the ground in a grassy swamp, of grasses, etc., lined with feathers and down. *Eggs*: 6-10, pale grayish olive or buffy. Av. size 2.54 x 1.71 (64.5 x 43.4).**General Range.**—North America, breeding far north. South in winter to Guatemala.**Range in Washington.**—Common winter resident and migrant thruout the State; abundant in winter on Puget Sound, especially in protected harbors.**Authorities.**—*Fulix marila* Baird, **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 791. T. C&S. L. Rh. D. Kk. B. E.**Specimens.**—(U. of W.) Prov. B. B. N. E.

AT Semiahmoo Spit, upon our northern boundary, the Bluebills begin to arrive from the North about the 20th of September, and their numbers are augmented for at least a month thereafter. The earlier arrivals come in small flocks of from a dozen to twenty-five individuals, borne upon the wings of a northwest breeze, and as they pass the narrow promontory of sand, the waiting gunners exact toll of those which enter the harbor. Upon the waters of the inner bay, Drayton Harbor, the incoming birds assemble in a great raft, five or ten thousand strong, and, if undisturbed, deploy to dive in shallow water,

feeding not only upon the eel-grass itself, but upon the varied forms of life which shelter in its green fastnesses.

It is not uninteresting to watch a small platoon of these somewhat prosaic fowls at supper. They spend as much time as possible below, and when they are well assured of safety they excuse themselves one by one, till not a soul remains in sight, not even a lookout. Then one emerges, then another, until the whole company is reassembled to compare notes on their luck, or to disappear again in one, two—thirty order, after their lungs are re-charged with air.

About half an hour before sunset, as tho by some preconcerted signal, a grand exodus takes place. Flock joins flock as the birds rise steadily against



SCAUP ASLEEP.

the wind. Mindful of their former experience, the ducks attain a height of two or three times that at which they entered the harbor and, strong in the added confidence of numbers, the serried host, some forty companies abreast, sweeps over the spit in unison—a beautiful and impressive sight. Some five minutes later a second movement of a similar nature is organized by half as many birds remaining; while a third wave, containing only a hundred or so of laggards, leaves the harbor destitute of Scaups.

Before the advent of the white man the Indians had methods of their own for obtaining these abundant fowls in wholesale quantities. According to Suckley, long nets were stretched from pole to pole along these narrow sand-spits just before the evening exodus, and the birds, not having been

molested upon entering their feeding grounds, fell easy victims as they endeavored to breast the spit at sunset. Fire hunting was also a favorite method. The ducks, at rest upon the water after nightfall, and dazzled by the glare of a light at the bow of a canoe, allowed themselves to be clubbed or speared by the unseen foe.

But the ingenious methods of the savage were as child's play in comparison with the pump guns of his more insatiable brothers. Bluebills are still common, or so we account them, but we only know a tenth part of their former numbers. Indeed, how silly we all are to carry out upon the present scale a slaughter which can have only one result, viz., the practical extermination of the wild fowl! We are a spendthrift breed, we Americans, born with gold spoons in our mouths, and reckless of our inheritance, the amplest ever provided the sons of men, but no more inexhaustible on that account than were



Photo by the Author.

BLUEBILLS AT BLAINE.

the oceans of Mars, where water is now declared to be at a premium. As with our acres and forests and fishes, so with our birds: there is a handwriting on our wall, and its interpretation is, "Cultivate, propagate, and preserve, if you would enjoy."

No bird is quicker to avail itself of protection than the Bluebill. Wherever the laws forbid shooting from the wharves or upon the waterways, there Scaups make themselves at home; and in those few places where they are not even frightened, as by idle stone-throwers, they become almost as tame as domestic ducks. They are already common in winter in most of the larger harbors on Puget Sound and, since they are fond of fresh water as well as salt, we may expect them to appear in considerable numbers upon the new bird reserve of Lake Washington. This bird reserve, by the way, will prove one of the proudest monuments of an exceptionally intelligent Legislature, that of 1909, and of the unselfish zeal of Miss Jennie V. Getty, of Kirkland. Such a prudent enactment as that which authorized this experiment in bird (and human) protection, gives us comfortable assurance that the handwriting on the wall will be heeded in Washington.

No. 319.

LESSER SCAUP.

A. O. U. No. 149. *Marila affinis* (Eyt.).

Synonyms.—LESSER SCAUP. LITTLE BLACKHEAD. BLUEBILL, etc. (sharing names applied to preceding form).

Description.—*Adult male*: Similar to preceding but smaller; the head not glossed with green,—violet or purplish instead. *Adult female*: Distinguishable from that of *A. marila* only by smaller size. Length 15.00-17.00 (38.1-43.1.8); wing 8.00 (20.3.2); tail 2.30 (58.4); bill 1.65 (41.9); tarsus 1.40 (35.6).

Recognition Marks.—See preceding species; smaller.

Nesting.—*Nest* and *Eggs* like those of preceding species. Av. size of eggs, 2.25 x 1.58 (57.2 x 40.1).

General Range.—North America in general, breeding chiefly north of the United States, migrating south to Guatemala and the West Indies.

Range in Washington.—Not common spring and fall migrant, but found on both sides of the Cascades. A few linger thru the summer east of the mountains, but it is not certain that they breed.

Authorities.—["Little blackhead," Johnson, Rep. Gov. W. T. 1884 (1885), 23.] *Aythya affinis*, Lawrence, Auk, Vol. IX, Jan. 1892, p. 42. L^r. Rh. D^r. Kk. B. E(H).

Specimens.—Prov. B. BN.

THE Little Bluebill of the sportsman is to all intents and purposes a smaller counterpart of the foregoing species; indeed, the colors of the female are almost exactly alike. The male of the variety under discussion may, however, be distinguished by a purplish iridescence on the head and neck, where its larger cousin shows a decided greenish cast. It may be considered almost a certainty that the two species occasionally interbreed, for in a large series of both kinds, may be found birds of intermediate size, which form almost perfect connecting links.

It is not quite so common a bird as the Greater Scaup, and in this State appears to restrict its range almost entirely to fresh water. In consequence of this choice, its food is such as to render the epicure perfectly safe in adding the bird to his bill-of-fare whenever possible.

The nesting habits of all the Scaups are so nearly identical that a description of one serves equally well for any of the others. The eggs are similar in color to those of the Greater, but, naturally, are smaller, averaging in measurement 2.24×1.54 inches.

It is probable that this species will never be found nesting in the State, as its inclinations are even more northerly than those of the Greater Scaup.

J. H. BOWLES.

NO. 320.

RING-NECKED DUCK.

A. O. U. No. 150. **Marila collaris** (Donov.).

Description.—*Adult male*: Head and neck sooty and lustrous black, with slight greenish and strong violet-purple iridescence; a short dense occipital crest; extreme chin white; a broad chestnut collar not clearly defined; fore-neck, breast, and upperparts rich, deep, brownish black, glossed with purplish on the breast, with green on the longer scapulars and tertiaries, minutely dotted with white on the scapulars; lower breast and belly white, becoming purplish on crissum and flanks; a transverse bar of white on sides of breast continuous with under-parts; sides minutely vermiculated dusky and white (as many as a hundred bars to the inch); wing-coverts grayish brown, becoming dull glossy green on posterior portion; speculum ashy gray tipped with brownish dusky, and bordered interiorly with bluish gray of outer tertials; axillars and lining of wings white; bill black, narrowly pale bluish at base, and crossed by band of same color near tip; feet dull blue with dusky webs; iris yellow. *Adult female*: Black of male replaced by brown,—dark amber brown on crown and upperparts, warm yellowish brown on breast and sides, paling on sides of head and neck to white on throat and whitish about base of bill; belly less clearly or extensively white; wing much as in male. Length 16.00-18.00 (406.4-457.2); av. of six males: wing 7.54 (191.5); tail 2.26 (57.4); bill 1.88 (47.8); tarsus 1.39 (35.3). Female somewhat smaller.

Recognition Marks.—Between Mallard and Teal size; short occipital crest; chestnut collar; white chin; transverse white bar on breast and wavy-barred sides of male serve to distinguish this bird from the other "Blackheads," which it superficially resembles. Peculiar yellowish brown of sides distinctive for female.

Nesting.—Not known to breed in Washington. *Nest*: on the ground in grassy marshes or lakeside swamps. *Eggs*: 6-12, indistinguishable in color from those of preceding species. Av. size, 2.25 x 1.60 (57.2 x 40.6).

General Range.—North America, breeding far north and migrating south to Guatemala and the West Indies.

Range in Washington.—Rather rare migrant on Puget Sound.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Coues, Vol. II. p. 195.] *Fulix collaris*, Baird, **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 793. T. B. E(H).

Specimens.—(U. of W.) Prov. C.

THIS elegant species bears a general resemblance to the Lesser Scaup, but is nowhere so common unless it be in Minnesota, the center of its breeding range. Unlike the Scaup, it is never seen in large flocks, seldom in companies of above a dozen or twenty individuals, and single birds are more frequently encountered than in the case of any other species. The bird shuns the open water, so much frequented by Blue-bills, and is seldom or never seen on salt water, not even on the tide-water marshes. In flight the individuals of a flock scatter widely, and they are likely to become still further separated as they feed in the rushes and deeper growth of the swamps and interior lakes. Here they subsist upon crayfish, snails, frogs, insects, and the various sorts of seeds which drop into the water from overhanging vegetation.

When surprised the Ringneck rises upon softly whistling wings, and beats a rapid retreat, while you notice the loose occipital feathers, ruffled by fear into a bushy crest, and observe that there is no white on the head, to cause confusion with other crested species.

No. 321.

AMERICAN GOLDEN-EYE.

A. O. U. No. 151. *Clangula clangula americana* (Bonap.).

Synonyms.—GOLDEN-EYE. WHISTLER. GARROT.

Description.—*Adult male*: Head and upper neck black, with a greenish gloss above and on sides; a circular white spot at base of upper mandible on side, but not reaching upper angle of bill; lower neck all around, underparts, the middle and greater wing coverts, the inner secondaries, and outer scapulars, centrally, pure white; remaining upperparts black, the white scapulars being black-bordered, and the feathers of sides similarly black-bordered along upper margin of the

region, and on the lower margin of the elongated posterior feathers; lower belly mottled with dusky; bill black; feet orange with dusky webs and claws; iris orange-yellow. *Adult female*: Head deep snuff-brown, without white spot; the color not reaching so far down on the neck as black of male; remaining black of male generally replaced by grayish dusky; sides of breast, chest, and sides more or less overlaid, or underlaid, with the same; white of wing interrupted by dusky gray, mostly confined to inner secondaries and adjacent tertiaries; bill varied with orange. *Young male*: Like adult female, but darker and with increasing indications of loreal white spot. Adult male, length 18.00-23.00 (457.2-584.2); wing 9.20 (233.7); tail 3.50 (88.9); bill along culmen 1.35 (34.3); bill from frontal angle to tip 1.90 (48.3); depth of upper mandible from frontal angle to tomlia .92 (23.4); from anterior margin of white spot to anterior angle of nostril .95 (24.1); from anterior angle of nostril to tip of bill .80 (20.3); tarsus 1.50 (38.1). Female length about 16.50 (419.1). Other dimensions proportionately smaller.

Recognition Marks.—Mallard size; black and white coloration; *round* white spot at base of bill on side; bright yellow eyes.

Nesting.—*Nest*: in hollow of decayed tree or stub, lined with grass, feathers, etc. *Eggs*: 6-10, dull greenish or pale bluish. Av. size, 2.35 x 1.70 (59.7 x 43.2). *Season*: May 10-June 20; one brood.

General Range.—North America, breeding from Maine and the British Provinces northward; in winter south to Cuba and Mexico.

Range in Washington.—Common winter resident and migrant, found throughout the State, but especially on salt water; sparingly resident in summer in the northern and mountainous counties.

Authorities.—*Bucephala americana*, Baird, **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 796. T. C&S. L², Rh. D², Kk. J. B. E.

Specimens.—(U. of W.) Prov. B.N. E.

OF all wing-music, from the droning of the Rufous Hummer to the startling whirr of the Ruffed Grouse, I know of none so thrilling sweet as the whistling wing-note of the Golden-eye. A pair of the birds have been frightened from the water, and as they rise in rapid circles to gain a view of some distant goal, they sow the air with vibrant whistling sounds. Owing to a difference in wing-beats between male and female, the brief moment when the wings strike in unison with the effect of a single bird, is followed by an ever-changing syncopation which challenges the waiting ear to tell if it does not hear a dozen birds instead of only two. Again, in the dim twilight of early morning, while the birds are moving from a remote and secure lodging place, to feed in some favorite stretch of wild water, one guesses at their early industry from the sound of multitudinous wings above, contending with the cold ether.

The American Golden-eye is of common occurrence in winter both upon the interior lakes and rivers, and upon the waters of Puget Sound. The birds associate in small flocks, usually of not more than eight or ten individuals, and

because of the prominence of their snowy plumage they find themselves obliged to maintain a wary outlook wherever found. On salt water the birds venture up on shore as often as they dare, and it is to be feared that they are not fastidious in the matter of their food. Mussels, crabs, and marine worms are commonly eaten, but that bugaboo of our beach-line, the decayed salmon, is also greedily devoured, and the birds soon become unfit for culinary consideration.

Tho chiefly a resident of northern and Arctic regions, the Whistler undoubtedly nests also in the vicinity of our own mountain lakes, especially along the eastern slope of the Cascades. As in the case of Wood Ducks, hollow trees or old excavations of the Pileated Woodpecker are utilized, and the cavity is warmly lined with dried grasses or leaves, and provided with a soft inner cushion of down. The birds are early nesters, and the youngsters lead a merry, care-free life upon some mountain lakelet when the summer season is just at its prime. A group of four we sighted on Coon Lake were no sooner made out than they paddled over in our direction, as curious as we were to see the stranger. When their curiosity was satisfied, the jolly quartette resumed their interrupted sport, which seemed to consist of a spirited game of tag. Now the ducklings splashed and floundered over the surface of the water, and now they took wing, circling the valley half a dozen times in breathless pursuit. After this they returned suddenly to plunge into the water, and so carried on the unending chase in its emerald depths—all as happy as children in Grandpa's old barn.

No. 322.

BARROW'S GOLDEN-EYE.

A. O. U. No. 152. *Clangula islandica* (Gmel.).

Synonyms.—WHISTLER. GARROT. ROCKY MOUNTAIN GARROT.

Description.—*Adult male*: Similar to preceding species, but gloss of head strongly blue-black or purplish; a triangular loreal white spot continuous with base of bill on sides and exceeding it above and below; white wing-patch crossed by transverse bar of black; and white of scapulars somewhat less extensive; tip of bill surrounding nail orange. *Adult female*: Presenting only trifling differences from that of the preceding species; bill of slightly different proportions, averaging stubbier and with slightly broader nail; *the tips of the greater coverts blackish*; bill as in male. Size of preceding, but averaging nearer the larger dimensions. Upper mandible from frontal angle to edge of tomia .92 (23.4); from anterior margin of white spot to anterior angle of nostril .88 (22.4); from anterior angle of nostril to tip of bill .64 (16.3)—(male). Similar dimensions of female .78 (19.8); .75 (19.1); .70 (17.8).

Recognition Marks.—Mallard size; black and white coloration; triangular,

or open-wing-shaped white spot at base of bill on side; head with *purplish* gloss. Female like preceding,—distinguishable with certainty only by blackish tips of greater coverts.

Nesting.—*Nest* and *Eggs* like those of preceding species. Av. of eggs, 2.47×1.77 (62.7×45). *Season*: c. June 1st; one brood.

General Range.—Northern North America; south in winter to New York, Illinois, Utah, and San Francisco Bay; breeding in the mountains from Oregon and Colorado northward. Greenland; Iceland; casual in western Europe.

Range in Washington.—Not uncommon spring and fall migrant; common resident in winter on bays and inlets of Puget Sound, Gray's Harbor, etc.; sparingly resident in summer in the mountains.

Authorities.—*Glaucionetta islandica*, **Lawrence** (R. H.), Auk, Vol. IX, Jan. 1892, p. 42. L^t. Rh. D^r. E.

Specimens.—(U. of W.) Prov. BN.

WHILE this species is much more common than the preceding thruout the State, its habits are very little known save in winter, and there is little to differentiate it to common observation from its better-known but no more truly "American" kinsman, *C. c. americana*. A flock which had discovered that immunity was to be had along the shore of the Navy Yard at Bremerton, once allowed a close approach very gratifying to the bird-man. Their presence also seemed peculiarly fitting at this spot, for they sat the water like men-of-war themselves, and the mind confessed the same desire to follow their many cruising.

Golden-eye breeds in the mountains of Washington, just as it does in Colorado and California, but knowledge of the precise location of a nest has never been the good fortune of any student in the Pacific Northwest.

No. 323.

BUFFLEHEAD.

A. O. U. No. 153. **Charitonetta albeola** (Linn.)

Synonyms.—BUTTER-BALL. SPIRIT DUCK.

Description.—*Adult male*: Feathers of head puffy, somewhat lengthened along crest and nape; head and upper neck black, sooty below, with brilliant violet, purple, steel-blue, and bronze-green metallic reflections; a broad white space from eye to eye around occiput; back, inner scapulars and tertiaries with touches on coverts and some narrow bordering on the outer scapulars and up-turned side-feathers glossy black; upper tail-coverts and tail ashy gray; remaining plumage, including a broad collar around neck, white; belly silky or washed with pale gray; bill dull bluish with dusky nail and base; feet flesh color, with black claws; iris brown. *Adult female*: Head and neck mouse-brown, darker on crown, lighter on throat; a dull white patch below and behind eye; speculum narrowly

white; reminiscences of white coverts of male in shape of two or three central spots on greater coverts; remaining plumage above, grayish dusky, below silky white, shading on sides and hind-neck. Length 14.00-15.25 (355.6-387.4); av. of six males: wing 6.67 (169.4); tail 2.93 (74.4); bill 1.10 (27.9); tarsus 1.31 (33.3). Female smaller.

Recognition Marks.—Teal size; plumage extensively white; head black, with large sharply defined patch of white from eye to eye behind. Similar spot much reduced, distinctive for female. Expert diver.

Nesting.—*Nest*: in hollow of tree or stump or in crevice of cliff, lined with grasses, feathers, etc. *Eggs*: 6-14, pale olive gray, creamy, or buffy white. Av. size, 1.98 x 1.46 (50.3 x 37.1). *Season*: c. May 20; one brood.

General Range.—North America; south in winter to Cuba and Mexico. Breeds from the northern border States northward, thru the Fur Countries and Alaska.

Range in Washington.—Abundant migrant and resident in winter, distributed thruout the State but especially common coastwise; sparingly resident in summer, chiefly in northern portion of East-side.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle: Cones. Vol. II, pp. 193-4.] *Bucephala albeola*, Baird, **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 798. C&S. L^t. Rh. D^r. Kk. J. B. E.

Specimens.—(U. of W.) P^t. Prov. B. BN.

CONSISTENCY is a jewel which no sportsman possesses. We go forth to slay, but murder is not in our hearts. We kill to eat, but we are not hungry; nor should we ever be in these days of plenty if our guns were wholly turned to rust. No; shooting is only our crude way of trying to get acquainted with the children of Nature; and we shall outgrow it some day just as our ancestors outgrew the custom of shooting members of another clan at sight. And we shall outgrow it for precisely the same reason. We shall learn that the other fellow is more interesting to us alive than dead—so much more interesting that it is really worth our while to make overtures of friendship.

If any sight in nature could disarm the powder-lust, it would be that of a half dozen Buffleheads dancing upon the sun-kissed waters of Puget Sound. Dapper, jaunty, bright-eyed, elegant, and altogether charming, are these dainty duck children. Their white breasts gleam in the sun and they ride so high in the water, that they seem more like fluffs of floating cotton than creatures of avoidupois. If that captivating drake now would only let us handle him, we should be perfectly satisfied. We would cuddle him in our arms, and stroke his puffy cheeks of rainbow hue, or give a playful tweak to his saucy little nose. But he does not fully appreciate our benevolent attitude; he does not immediately reciprocate our desire to fondle him—therefore, we will give him the left barrel.

Buffleheads are among our most abundant ducks in fall and winter thruout the State. They are found alike in swift rivers and on placid mill-ponds.

Brackish pools and tide channels, tide flats and tossing billows, all are alike to these happy and hardy little souls. Perhaps the greatest number, however, are found upon the bays and shallower waters of Puget Sound. They associate chiefly in little flocks of from half a dozen to fifty individuals and they venture inshore, as often as they dare, to feed on the rising tide. When they reach us in October they are fat as butter (whence, of course, "Butterball"), but they have gained their flesh on the cleaner feeding grounds of the northern interior. On a fare of fish and marine worms, which they obtain in salt water almost entirely by diving, their flesh soon becomes rank and unprofitable.

Naturally confiding and easily approachable in the fall, the Bufflehead soon acquires powder-experience, and gradually becomes the most difficult of all birds to kill. He will not only give the hunter a wide berth, but he will dive at the flash of a gun. He is clad, moreover, in a magic coat of mail, and his plumage *appears* to shed bullets as readily as it does water. No hunter but feels that the bird is a little meany, and he has his little collection of stories to back up his belief. For instance, from the vantage of a river bank and at close range, I once shot a drake Butterball seven times with "4's"—hit around him every time too, but did not learn the flavor of his flesh. Another cut down in midair with 2's fell limp as any pigeon, but received magic restoration from the water, arose upon the instant and flew away as tho nothing had happened. And then, to cap the climax, if not killed outright at the first shot, the bird will commit suicide by drowning. On tide flats, with never a ghost of a chance at concealment, we have seen birds dive and remain below, self-entangled in the eel-grass, until death by drowning was certain. This fact is well established, not only in the case of Buffleheads, but in that of many other ducks; and carcasses have been found in the eel-grass at low tide in bays which are much shot over.



Photo by Warburton Pike.

No. 324.

OLD-SQUAW.

A. O. U. No. 154. *Harelda hyemalis* (Linn.).**Synonyms.**—LONG-TAILED DUCK. SOUTH-SOUTHERLY. OLD-WIFE.

Description.—*Adult male in winter:* General plumage rich dark brown, or brownish black, and white; breast, broadly,—continuous with band around upper back—back, centrally,—to end of tail—wings (reddening on secondaries), and patches on sides of neck, brown; sides of head in front, including eyes, warm ashy gray, but eyelids white; superior scapulars elongated, reaching nearly to tip of wing, pale ashy white; sides ashy-tinged; axillars and lining of wings smoky brown; remaining plumage, including crown and throat and neck all around, white; tail graduated, the central pair of feathers much elongated, blackish, the lateral feathers short, white; bill black, saddled with orange toward tip; feet bluish with dusky webs and claws; iris bright red. *Adult male in breeding season:* Head, neck, fore-breast, and upperparts rich chocolate brown or sooty black; forepart of head silvery gray, whitening around and behind eye; back varied by rich fulvous or bright reddish on longer scapulars, etc.; lower breast and upper belly dark sooty gray; below white shaded with pale gray on sides. *Adult female in winter:* Head and neck white; a dark brown patch on head and nape and another on side of neck; upperparts dusky or blackish, varied, especially on scapulars, with considerable light brown or ochraceous; fore-neck and breast light brown above, shading thru gray into white of lower parts; tail sharply pointed, but central feathers not lengthened; bill and feet dusky green; iris yellow. *Adult female in breeding plumage:* Similar to winter plumage, but head and upper neck dark grayish brown or blackish; a white space about eye and another on the side of the neck; scapulars with still more ochraceous. *Young:* Like adult female in winter, but more uniformly colored above, the males gradually acquiring the ashy scapulars. Adult male length 20.50-23.00 (520.7-584.2); wing 9.00 (228.6); tail 8.00-9.25 (203.2-235); bill 1.10 (27.9); tarsus 1.32 (33.5). Female somewhat smaller,—tail 2.50 (63.5).

Recognition Marks.—Mallard size; white and sooty brown; head white with ashy and dark patches, or brown with grayish patch; tail (of male) greatly elongated; bill short,—black and orange; face full.

Nesting.—Does not breed in Washington. *Nest:* on the ground in tall grass or bushes near water. *Eggs:* 6-12, dull grayish green, or light olive-buff. Av. size, 2.05 x 1.50 (52.1 x 38.1).

General Range.—Northern hemisphere; in North America south to the Potomac and the Ohio (more rarely to Florida and Texas) and California; breeds far northward.

Range in Washington.—Common in winter on Puget Sound and along the Coast—abundance dependent upon severity of season.

Authorities.—*Harelda glacialis*, Leach, Newberry, Rep. Pac. R. R. Surv. Vol. VI, pt. IV, 1857, p. 104. T. C&S. L². Rh. Kk. B. E.

Specimens.—(U. of W.) Prov. B. BN. E.

If you are able to disregard the peevish dabs of cold rain which the north wind flings in your face as you trudge to and fro on the for'ard deck of the struggling steamer, you will see a stirring sight,—an endless procession of waterfowl of a dozen species hurrying southward. The time may be late October, when only the timid fly south, or it may be early January, when even the most hardy gracefully own defeat and come scampering down before the compelling blasts. The place would better be Georgia Strait, or say, Hale Passage, between Lummi Island and the mainland. Here the "Ice Ducks" revel in the open water, and here they rise before the plodding steamboat, passing and repassing the bows in long melodious lines, or dashing off hotly to less disturbed areas.

Tho his flight be graceful and strong, it is as a musician that the Long-tailed Duck enjoys preeminence. Of course the interpretation of music depends on both the culture and the mood of the listener. Fisher-folk, weary of their incessant racket, have called our birds Scolders, Aunt Huldys, Old-squaws, and other unpleasant things; but we bird-people are apt to bend an indulgent ear toward the efforts of our favorites, and especially in quarters where merit is unexpected and rare. Sundevall, the Swedish (?) naturalist, called the bird the singing duck, "because its spring song is both sweet and sonorous." The birds are eminently sociable, and a company of twenty individuals aroused to utterance at the same time will raise a chorus which may be heard a mile away. The notes are mellow and resonant, but it may be conceded that they have something of a grumbling quality. *O(nk)h-o(nk)h-lch*, *o(nk)h-o(nk)h-lch*, *o(nk)h-o(nk)h-lch* may afford a suggestion of the trumpeting of a single individual; but when all are at it at once the effect is indescribably enhanced.

Says Mr. E. W. Nelson: "During all the spring season until the young begin to hatch the males have a rich musical note, frequently repeated in deep, reed-like tones. Amid the general hoarse chorus of waterfowl which is heard at this season, the notes of the Old-Squaw are so harmonious that the fur traders of the upper Yukon have christened him the Organ Duck, a well-merited name. I have frequently stopped and listened with deep pleasure to these harmonious tones, while traversing the broad marshes in the dim twilight at midnight, and while passing a lonely month on the dreary banks of the Yukon delta I lay in my blankets many hours at night and listened to these rhythmical sounds which with few exceptions were the only ones to break the silence."

These notes, however, are not at all confined to the spring of the year, for they are used to express uneasiness at the presence of the hunter as readily as ardor in love. If one has hostile intentions it is easy to single out a chorus and row toward it, even tho the birds are unseen. When seated upon the water these birds exhibit much white, and under certain weather conditions

are not easily seen even at close quarters. It is useless to seek them as game, however, for they are expert divers, and as a consequence rank animal feeders.

More frequently than any other species, they are found entangled in fish nets whither they have gone in pursuit of finny prey; and upon the Great Lakes, where winter trapping is more common, they are sometimes taken dead in six fathoms of water.

The Old-Squaw leaves us early in March and retires to high northern latitudes to breed, being found at the appropriate season from the Barren Grounds of Alaska to Grinnell Land.

No. 325.

HARLEQUIN DUCK.

A. O. U. No. 155. **Histrionicus histrionicus** (Linn.).

Synonyms.—LORD AND LADY. PAINTED DUCK. ROCK DUCK. MOUNTAIN DUCK.

Description.—*Adult male*: Prevailing color plumbeous slate tinged with purplish, darkening on head and neck, blackening on top of head, lower back, rump, and tail, changing on underparts behind breast (including lining of wings) to sooty brown, on flanks to lighter brown; plumage strikingly crossed and slashed with white; a large wing-shaped patch at base of bill produced above as lateral crown-stripe, where yielding to light chestnut posteriorly; a clear-cut rounded spot behind auriculars; lengthened patch on side of neck; a narrow transverse patch at base of neck on side, meeting its fellow, or not, in front and behind; a crescentic patch on side of breast before wing, the last two patches sharply defined by bordering black; a white spot on wing-coverts; a white bar across the ends of the greater coverts and some of the secondaries; scapulars and outer webs of the inner secondaries chiefly white; and, lastly, a small white patch on side of rump; speculum metallic violet or purplish. Bill blackish or horn-blue to olivaceous; irides reddish-brown; feet greenish-dusky with black webs. Perfect plumage is not acquired till the third season. Young males differ chiefly in the purity of the colors, those of the second season having some grayish brown edging on the wings, and flanks finely barred, light brown and fuscous. *Adult female*: General plumage plain dark brown, changing thru brownish-gray of upperparts to whitish on belly. Of the white spots of the male only the two anterior ones are represented, and of these the facial patch is much obscured by brownish. Length of male 16.00-17.50 (406.4-444.5); wing 7.50 (190.5); tail 3.50 (88.9); bill 1.12 (28.5); tarsus 1.30 (33). Female a little smaller.

Recognition Marks.—Teal to Crow size; plumbeous coloration with white stripes of male unmistakable; female obscure as to color, but following proportions of male, small bill, high at base, etc.

Nesting.—*Nest*: in vicinity of wild mountain streams, under logs, tree-roots, drift, rocks, etc., of weeds and grasses, lined with down. *Eggs*: 6-10, pale buffy or creamy white. Av. size, 2.30 x 1.60 (58.4 x 40.6). *Season*: April-May; one brood.

General Range.—The northern hemisphere, but chiefly North America, especially coastwise; breeding in northern latitudes and in the mountains of the West; south in winter to northern New England, the Middle States, and the coast of California.

Range in Washington.—Probably not uncommon, but little observed migrant and resident, breeding in the Cascade Mountains (and probably the Olympics) and summering in considerable numbers among the San Juan Islands, less common among the Olympiades.

Authorities.—*H. torquatus*, Bonap., **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 799. T. C&S. Rh. Kk. B. E.

Specimens.—(U. of W.) Prov. BN.

THE scientists derive great satisfaction from their attempts to tell us why certain things are so and so, and we nod gravely from time to time in pretended comprehension; but there are matters which are better left to folk-lore. We can understand in a measure how the partridge came to look like dead leaves, and the snipe like dead grass, but who may say in terms of cold logic how the Harlequin acquired his fantastic livery? No; it must have been in this wise. The first Harlequin, before he was a Harlequin, that is, was of a nearly uniform slate color, with some relief of dull cinnamon. But, clad in this somber garb, folks mistook him for a coot, which were a misfortune indeed for such a dainty creature. Driven to desperation he sought out Mother Nature and begged to be retouched. This the good dame, being in a whimsical mood, consented to do. She seized a brush from the nearest pot of paint, which happened to be white, and gave her discontented subject, between fits of laughter, sundry daubs and slashes with it, ten to a side, sending him forth at the last a very—Harlequin.

Seriously, it is difficult to detect the *raison d'être* of this eccentric dress; yet it is barely possible that it does afford its owner an exact protection among the turbulent, foam-flecked waters of its summer home. Certain it is that its bizarre habit has made the bird as frequent a subject for the taxidermist as its rarity has allowed.

Rarity is the all but universal testimony in reference to the Harlequin. Yet while cruising about the islands of the Lower Sound in the summer of 1905 with Mr. J. M. Edson, of Bellingham, I came upon this Duck in astonishing numbers. They are, indeed, at this season characteristic denizens of the waters surrounding the smaller and more isolated islets.

Their feeding seems largely confined to the kelp beds and is both by tipping and diving. It is fair to surmise that they subsist chiefly upon the molluscs and small crustaceans which attach themselves to the floating leaves of this plant. When undisturbed the birds sit jauntily upon the water with partly ruffled crests and with active tails, noticeable for length; but when the word of caution has been passed around they lie motionless, with the feathers of the head close down and the tail depressed. They are somewhat given to

charging about the rocks on exploratory tours and sallies, but they seldom pass the gunner a second time, and have no reluctance to exchange one feeding ground for another.

At Danger Rock, in President Channel, under date of June 24th, I note: "We thought we had seen Harlequin Ducks before, but when we returned to this island on the rising tide at 6.30 p. m., we put up a flock of not less than five hundred, and the sound of their rising was like the sound of a storm upon the water. Where *do* these birds come from? Where *do* they nest? and above all *when* do they nest?"

These questions are answered in part by W. H. Wright, the well-known guide and nature-photographer of Spokane. He reports this duck as fairly common about the headwaters of the mountain streams in the Cascades, but especially so in the Selkirks. He has never troubled to find the eggs, but has repeatedly flushed the females from under drift-piles and windfalls. Flocks of young appear by the middle of May, at a time when the snow is still many feet deep in places upon the banks of the torrential streams which they frequent. The old birds are often seen feeding or resting upon the snow-banks, while the young birds are capable of making their way thru the most troubled waters.

On the whole it would appear that our summer idlers are aggregations of non-breeders, immature birds—they do not attain full plumage until the third year, according to Coues—and aged adults, the laggards of a great host whose active members annually lose themselves in the fastnesses of northern Washington, British Columbia, and Alaska.

It is noteworthy, however, in this connection, that during the reconnoissance of the islands off the western coast of Washington, the Olympiades, during July, 1906, not a single Harlequin was sighted. In the following season, viz., June 24, 1907, a small flock was encountered near Ozette.

No. 326.

PACIFIC EIDER.

A. O. U. No. 161. *Somateria v-nigra* Gray.

Description.—"Adult male: Top of the head velvety black, with a slight violet gloss, divided mesially, from the middle of the crown back, by narrow stripe of greenish white; the black extending forward in a rather wide stripe along the upper edge of the lores, underneath the basal angle of the maxilla, but not extending anteriorly as far as the nostril; greater wing-coverts, secondaries, middle line of the rump, upper tail-coverts, and entire lower parts from the breast back, deep black; primary-coverts, primaries, and tail blackish dusky; rest of the plumage, including the falcate tertials, continuous white, the breast tinged with creamy buff (much less deeply than in *S. mollissima*), the upper half of the nape.

the auricular region, and the upper border of the cheeks deeply stained with yellowish green; throat with a large V-shaped mark of velvety black. Bill orange-red, paler terminally (light reddish in the dried skin) then nail yellowish white; iris dark brown; feet yellow. *Adult female*: Light fulvous, barred with black, the bars widest on the scapulars; head and neck finely streaked with black, the throat nearly immaculate; abdomen usually plain grayish brown; greater wing-coverts, primary coverts, remiges, and rectrices plain grayish dusky, the greater coverts and secondaries distinctly tipped with white. *Young*: Similar to the adult female, but upper parts dusky, the feathers bordered with rusty fulvous, the greater coverts and secondaries not tipped with white" (B. B. & R.). Length of adult about 24.00 (609.6); wing 11.50-12.75 (292.1-323.9); bill along culmen 1.80-2.26 (45.7-57.4), to point of basal angle 2.50-3.10 (63.5-78.7); tarsus 2.00-2.30 (50.8-58.4). Female smaller.

Recognition Marks.—Gull size; black of crown and underparts and white of remaining plumage (male) unmistakable; mottled brown plumage of female with size distinctive.

Nesting.—Does not breed in Washington. *Nest*: on the ground, of grass, moss, etc., copiously lined with down. *Eggs*: 6-10, light olive-drab. Av. size, 3.00 x 2.00 (76.2 x 50.8). *Season*: June; one brood.

General Range.—Both coasts of the North Pacific and Bering Sea, the western Arctic coast of Alaska and eastern Arctic coast of Siberia; east to Great Slave Lake; chiefly resident, but south irregularly in winter to Washington.

Range in Washington.—Casual in winter on Puget Sound, and the West Coast(?).

Authorities.—Bowles, Auk, Vol. XXIII, Apr. 1906, p. 140.

EIDERS are among the hardiest of ducks in the far North, and they are migratory only to the extent in which the ice forces them out of their summer haunts and drives them to the open seas. Their occurrence so far south as Puget Sound is rare, almost accidental, and there is no British Columbia record.

Our chief interest in the Eider Duck attaches to its use of down in lining its nests. Since it breeds under Arctic conditions, it is necessary that the eggs be not exposed to the cold air during the absence of the parent. Each day, therefore, as an egg is laid, in a grass lined depression on some moss-grown slope or small knoll well back from the sea-shore, the bird plucks feathers from her breast; and when the set of six is completed and incubation begun, the eggs are quite buried in an abundance of soft, slate-colored down. Pacific Eiders do not colonize as do *S. mollissima*, and others of the North Atlantic waters. The gathering of the down has not, therefore, come to have much commercial importance and may never reach the dimensions of a traffic. The Aleuts and Eskimos are not ignorant of its uses, however, and the exploitation of Alaska by the white man is bringing such resources as these into a regrettable prominence. It is all very well for the natives to subsist, as they have for centuries, upon the eggs of birds, and to clothe themselves with their skins, but the wild life of Alaska cannot long bear up under the strain imposed upon it by an army of gold-seekers.

No. 327.

AMERICAN SCOTER.

A. O. U. No. 163. *Oidemia americana* Swains.**Synonyms.**—AMERICAN BLACK SCOTER. SEA COOT. BLACK COOT.

Description.—*Adult male*: Entire plumage black, glossy and sooty; outline of feathers at base of bill not peculiar; base of culmen (especially during breeding season) swelled or knobbed,—the knob orange, the rest of the bill, including eyes, black. *Adult female and young*: Sooty gray or fuscous whitening on belly, also on throat, sides of head, and neck, where contrasting with dark fuscous of crown and nape; outline of feathers at base of bill substantially as in male, but culmen not gibbous. Length 18.00-22.00 (457.2-558.8); wing 9.00 (228.6); tail 3.00 (76.2); bill (chord of culmen) 1.70 (43.2); tarsus 1.80 (45.7).

Recognition Marks.—Mallard size; plumage solid black; female fuscous, lightening below, and on sides of neck; loreal feathering not peculiar.

Nesting.—Does not nest in Washington. *Nest*: on the ground in marshes of the interior or along the sea coasts; of grasses, lined with feathers. *Eggs*: 6-10, pale buff or brownish buff. Av. size, 2.55 x 1.80 (64.8 x 45.7).

General Range.—Coasts and larger inland waters of northern America; breeds in Labrador and the northern interior; south in winter to California, Colorado, the Great Lakes and New Jersey.

Range in Washington.—Not common winter resident and migrant on Puget Sound and West Coast; non-breeding birds resident in summer.

Authorities.—Baird, Rep. Pac. R. R. Surv. IX. 1858, p. 808. C&S. L. Rh. B. E.

Specimens.—Prov.

"SCAT!" says the housewife, when pussy starts to sharpen her claws on the oleander tree, "S s s s cat!" In some such way may have originated the commoner name of sea-coot—a hiss to start the uneasy fowl in motion—"Ssss you coot. S'coot!" whence, of course, Scooter and Scoter, the bird that scoots. Whatever philologists may think of this derivation, it has at least the virtue of plausibility, and we shall remember that those ungainly black fowls which are forever getting in the way of steamboats, and shuffling off with wheezy complaint, are Scooters. Now and then, if we are watchful, we shall see a little company of Black Ducks which show no trace of white either on head or wing. And if the black is black enough to assure us that we are looking at male birds, and especially if we catch a glimpse of orange at the base of the upper mandible, we may know that we are seeing the somewhat rare American Scoter. These birds are very abundant in Alaskan waters, but they do not venture south as often, nor in such numbers, as do the two succeeding species. They are somewhat smaller than the other birds, but there is nothing in habit or be-

havior to distinguish them during their southern residence from their better-known compeers. They have the same perverse habit of dallying in our waters thru the summer season (without giving the slightest assurance that they nest with us) and I saw a company of some two hundred Americans idling offshore near Waldron Island on the 22nd of June, 1905.

No. 328.

WHITE-WINGED SCOTER.

A. O. U. No. 165. *Oidemia deglandi* Bonap.

Synonyms.—WHITE-WINGED COOT. SEA COOT. SCOOTER. AMERICAN VELVET SCOTER. BLACK DUCK. SQUAW DUCK. FISH DUCK. CLAM DIGGER. SEA DUCK.

Description.—*Adult male*: Speculum white; a white spot below and including eye; entire remaining plumage deep brownish black; culmen gibbous at base, but nearly covered by feathers which reach laterally almost to nostrils; loreal feathering usually, but not always, extending further forward than frontal feathers; bill black, varied by orange-red on lateral and terminal portions (but not on knob or edges). Black less intense in winter. *Adult female and immature*: Plain dusky brown, a little lighter below; and with two dull whitish spots on side of head, on lore, and ear-coverts; speculum white; extension of loreal feathers as in adult male, but bill only slightly gibbous, and with less orange. Length 19.00-24.00 (482.6-609.6); wing 11.00 (279.4); tail 3.25 (82.6); bill along culmen 1.60 (40.6); anterior margin of loreal feathering to tip of bill 1.55 (39.4); tarsus 2.00 (50.8).

Recognition Marks.—Mallard size or larger; plumage black or dark brown (female); white wing-patch (speculum) distinctive.

Nesting.—*Nest*: on the ground, under a bush, often at a considerable distance from water, lined heavily with twigs, dried plants, and moss, with a few feathers. *Eggs*: 6-10, pale buff or light greenish buff. Av. size, 2.68 x 1.83 (68.1 x 46.5). *Season*: June; one brood.

General Range.—Northern North America, breeding from Labrador, North Dakota, and Washington, to Alaska; south in winter to Lower California, the Ohio River, and Chesapeake Bay.

Range in Washington.—Abundant resident, except in summer, on Puget Sound and the West Coast—the most common duck; formerly common, now rare, breeder in northern tier of counties east of the Cascades.

Authorities.—*Melanetta velveta*, Baird, **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 805. C&S. L². Rh. D¹. Kb. Kk. B. E.

Specimens.—(U. of W.) Prov. B.

THE Scoters are the characteristic salt-water ducks, and taken together probably outnumber the remaining winter residents of Puget Sound. Altho

sparingly resident in summer, their numbers are greatly augmented in October and early November and their ranks are normally depleted again by the first of May. Speaking roughly, they are everywhere during the winter season; but, more accurately, they are stretched out in a thin line which closely parallels the eight hundred miles of shoreline which our great inlet, with its tributaries, boasts. If their distribution were platted, black spots or patches would appear on our diagram opposite the smaller bays and minor estuaries, while heavy shading, or "scumble," would be required to indicate their abundance in narrow passages.

The precise alignment of this great black army is determined in part by the range of a shotgun, and more, perhaps, by the outlines of the reefs, mussel-beds, and barnacle-covered rocks which extend along our shores. The birds follow the fortunes of the tide thruout the day, feeding greedily as the retreat of the water makes otherwise unattainable depths accessible, and following up the return movement no less eagerly yet always a gun-shot offshore.

The Coots feed not only upon fish and crustaceans, but upon barnacles, mussels, and clams as well. These last they devour shells and all, up to a diameter of two inches or more, and their digestion appears to be in no wise impaired by this heroic diet. Their flesh, as a consequence, is delightfully immune from the attack of the White Man, altho the Indian has eaten "Siwash Duck" from time immemorial. A fat Coot will weigh up to six or seven pounds, thus exceeding the avoirdupois of the much larger-looking Black Brant.

Scoters have considerable difficulty in rising from the water, and, like Loons, require a good deal of sea-room. The feet assist the wings for some moments as the birds are getting launched, and the laboring movement of the wings gives rise to a murmuring sound which is not unpleasant to the ear. Indeed, a teeming bay, a-hum with the music of a thousand flying Scoters, is an orchestra in itself and needs no help of wind or wave to write its score upon the heart. It is of the sea, salty.

At the time of the bird's maximum fatness, the flight of the Scoter is but little more than an effort to keep out of the water, and it is abandoned with evident relief. During migrations, however, the birds are capable of rapid flight, moving as they do in straggling companies numbering from a dozen to several hundred. Occasionally, the Scoters fall into line, goose-fashion, and one looks twice to see if it be not, indeed, a flock of passing Brant. If obliged to beat against the wind, as upon the Pacific Ocean, the flock flies low, rising over the crest of each billow, and disappearing in every hollow in order to get what shelter it may.

On Semiahmoo Spit these birds are much hunted—not at all for the excellence of their flesh, but because the supply is unfailing and because of their interest as winged targets. The Scoters feed by hundreds during the day on Drayton Harbor, but feel impelled to leave its uncertainties toward nightfall

and seek the safety of open water. The wiser birds defer flight till well after dark, when law-abiding gunners have gone home. During the passage of the sand-spit the unhappy birds are subjected to a grilling fire, but none think of rising above danger. The path of the first flock determines the point at which others will follow for the remainder of the evening. It is as tho the word had been passed around that the passage would be attempted at a certain point that night, and successive platoons obey the general order in spite of persecution. The flight is greatly quickened as the spit is approached, and should a flock of experienced birds discover the gunner ahead of them, they do not tower or swerve, but each in his course begins a frantic wriggling and twisting, achieving thus a sort of cork-screw motion, which is really very effective in upsetting the gunner's calculations. In spite of the grim tragedy of the thing it is laughable to see the birds perform in this way, like schoolboys before the uplifted lash.

Mr. Bowles writes me that when a migrating flock of Scoters essays to pass a boat at too great a height, say two hundred yards, a violent banging of the oars on the side of the boat will cause the whole flock to tumble out of the sky into easy gun-shot. The cause of this phenomenon is not easily found.

While the eggs of this Scoter have never been taken in Washington, it is possible that a few breed here in the vicinity of the interior lakes. They are late breeders; and the nest is a flimsy affair, a mere depression in the earth scratched in a weed-patch or under a bush and marked by a few weed-stems and grasses. Eggs, of a pinkish flesh-color, are laid at the rate of one per day, and incubation is not undertaken until the set of a dozen or so is complete. Prior to absenting herself each day, the female plucks down from her breast to cover her eggs and scrapes leaves and trash over the whole. The male bird loses interest in family affairs when his mate is started on her long vigil, and he goes in for club-life at the seaside instead. The chicks make their appearance in due season, and require zealous attention from their mother until such time as they may be large enough to walk, or fly, to the ocean.

No. 329.

SURF SCOTER.

A. O. U. No. 166. **Oidemia perspicillata** (Linn.).

Synonyms.—SURF DUCK. SEA COOT. SQUAW DUCK (Etc. as in preceding species).

Description.—*Adult male:* A triangular patch on nape and a rounded patch on forehead between eyes, shining white; remaining plumage glossy black, duller below; frontal extension of feathers reaching nearly to nostril; bill swollen at base and singularly variegated in hue, pinkish white on sides, upon which a sharply defined squarish patch of black, a line of brilliant carmine between this patch and

base of bill, culmen dark red shading into orange; under mandible orange and white; irides white; feet orange-red, blackish on joints and webs. *Adult female*: Plumage sooty brown, changing on underparts thru grayish brown to silvery gray; no sign of white patches of male, but two dull whitish areas on side of head, one buccal and one auricular (sometimes indistinct or even wanting); bill blackish, scarcely swollen at base; frontal feathering not so extended as in male; feet blackish tinged with orange-red. *Immature male*: Like adult female, but patches on side of head more definitely white. Length of adult: 18.00-21.00 (457.2-533.4); wing 9.00-10.00 (228.6-254); bill along gape 2.25-2.50 (57.2-63.5); female averaging the smaller of these dimensions.

Recognition Marks.—Crow size; white patches on forehead and nape of male; whitish patches on sides of head of female and young male distinctive.

Nesting.—*Nest* and *Eggs* much as in preceding species. Av. size, of eggs 2.47 x 1.70 (62.7 x 43.2).

General Range.—North America at large chiefly coastwise, but also on larger waters of the interior, breeding from northern British Columbia and Labrador to Arctic Coast; south in winter to Lower California and Florida; casual in Europe.

Range in Washington.—Common winter resident and migrant on Puget Sound and West Coast; rarely seen on fresh water.

Authorities.—*Pelionetta perspicillata*, Kaup, **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 806. T. C&S. L. Rh. Kb. Kk. B. E.

Specimens.—Prov. C. BN. E.

THE prow of any one of two hundred steamers affords an ideal opportunity for the study of winter bird life on Puget Sound waters. Wanton shooting from such stations has been discontinued, so that knowing birds postpone flight till the last moment at the approach of a steamboat. No birds are more frequently encountered than the Scoters, Surf and White-winged; and it is a source of never-ending enjoyment to observe their behavior on such occasions.

At first it is presumed that the boat will pass at a considerable distance. In default of this issue the birds decide to outswim it, and bend low to their task. But the monster approaches. The Coots stop rowing and wag their heads inquiringly from side to side. It certainly is coming. Whatever shall we do? Finally, one bird pulls himself together and begins to pound the water with his wings and feet. The rest follow suit with much grumbling and wheezing, and soon they are really off, pattering and scooting over the water. But Flagstaff's wind gives out (and he is the handsomest of the company). He is too fat to fly, and he gives up after a few strokes, falling back panting into the water. There is always one resort left an honest sea-fowl. You quench your curiosity in his gaudy head-gear, bending low over the railing, and as the steamer is almost upon him, the bird dives, swiftly, surely, confidently, quite out of harm's way, and does not reappear short of a hundred yards.

The head of the male Surf Scoter presents one of the most bizarre appearances in nature. It has only the Tufted Puffin for a rival, and I think that the odds are even here. Try to conjure before your mind's eye the colorings of the Scoter's bill alone: black, white, pink, yellow, cadmium, orange, and carmine, and those displayed not only in transitions but in the most abrupt contrasts. Add a swelling which involves not only the base of the bill but the whole anterior portion of the head; then a white eye; then two patches of dazzling white on black ground for the rest, and you have this Beau Brummel of the seas.

But the ladies like him; they have to, for they are such homely bodies themselves that the perversity of attraction must be mutual. I have seen a Surf Scoter courtship in mid April. Five males are devoting themselves to one female. They chase each other about viciously, but no harm seems to come of their threats; and they crowd around the female as tho to force a decision. She in turn chases them off with lowered head and outstretched neck and great show of displeasure. Now and then one flees in pretended fright and with great commotion, only to settle down at a dozen yards and come sidling back. If she will deign a moment's attention, the flattered gallant dips his head and scoots lightly under the surface of the water, showering himself repeatedly with his fluttering wings. One suitor swims about dizzily, half submerged, while another rises from the water repeatedly, apparently to show the fair one how little assistance he requires from his feet in starting, a challenge some of his corpulent rivals dare not accept, I ween. I have watched them thus for half an hour, off and on, and the villains still pursue her.

Surf Scoters move about freely in companies of their own kind, or associate to some extent with the allied species. Of the almost incredible numbers found in Alaska we know little, and there is no reason to suppose that any nest with us.

"On August 23, 1878, I visited Stewart Island, about ten miles to the seaward of Saint Michaels. As I neared the island in my kyak I found the water literally black with the males of this species, which were united in an enormous flock, forming a continuous band around the outer end of the island for a distance of about ten miles in length, and from one-half to three-fourths of a mile in width. As the boat approached them those nearest began to rise heavily by aid of wings and feet from the glassy surface of the gently undulating but calm water. The first to rise communicated the alarm to those beyond, until as far as could be seen the water was covered with flapping wings and the air was filled with a roar like that of a cataract. The rapid vibrations produced in the air by tens of thousands of wings could be plainly felt" (Nelson).

No. 330.

RUDDY DUCK.

A. O. U. No. 167. *Erismatura jamaicensis* (Gmel.).

Synonyms.—PIN-TAIL. QUILL-TAIL. SPINE-TAIL. RUDDY DIVER. SPOON-BILLED BUTTER-BALL. BLUE-BILL. BULL-NECK.

Description.—*Adult male*: Top of head and nape black; cheeks and chin white; neck all around, chest, sides of breast, sides, and upperparts, rich chestnut-red; wings, lower back (but not upper coverts), and tail, blackish; tail, mostly exposed, widely spread, graduated at sides, composed of eighteen to twenty stiffish feathers, which, *except in the breeding season*, have the tips of the shafts more or less exposed; remaining underparts silvery white (overlying dark brownish gray, which is irregularly and sometimes completely exposed, especially on sides, according to the wear of the plumage), lightly washed, especially on breast, with bright rusty; bill light blue; feet bluish gray with dusky webs; iris brownish red. *Adult female and immature*: Above, including top of head, dark grayish brown or dusky, finely mottled, or sometimes indistinctly barred, on scapulars, etc., with buffy gray; throat and sides of head and neck, contrasting with crown, whitish, usually crossed longitudinally on sides of head by an indistinct dusky band; underparts as in adult male, but underlying brown more extensively outcropping, and fore-neck, chest and sides heavily tinged with bright rusty or ochraceous. Length 14.00-16.50 (355.6-419.1); wing 5.67 (144); tail 2.65 (67.3); bill 1.60 (40.6); greatest breadth of bill .92 (23.4); tarsus 1.36 (34.5). Females average a little smaller.

Recognition Marks.—Teal size or slightly larger; chestnut-red coloring of male; dark and light contrasting on side of head in female and young; "chunky" appearance; tail of stiff, usually pointed, feathers, generally upturned while on water.

Nesting.—*Nest*: of reeds, etc., built up in margin or floating in water of pond or sluggish stream; deserted Coots' nests sometimes used. *Eggs*: 6-14, buffy or dull white, and with finely granulated surface. Av. size, 2.45 x 1.80 (62.2 x 45.7). *Season*: c. May 20; one brood.

General Range.—North America in general, south to the West Indies and thru Central America to Colombia; breeds thruout much of its North American range and south to Guatemala.

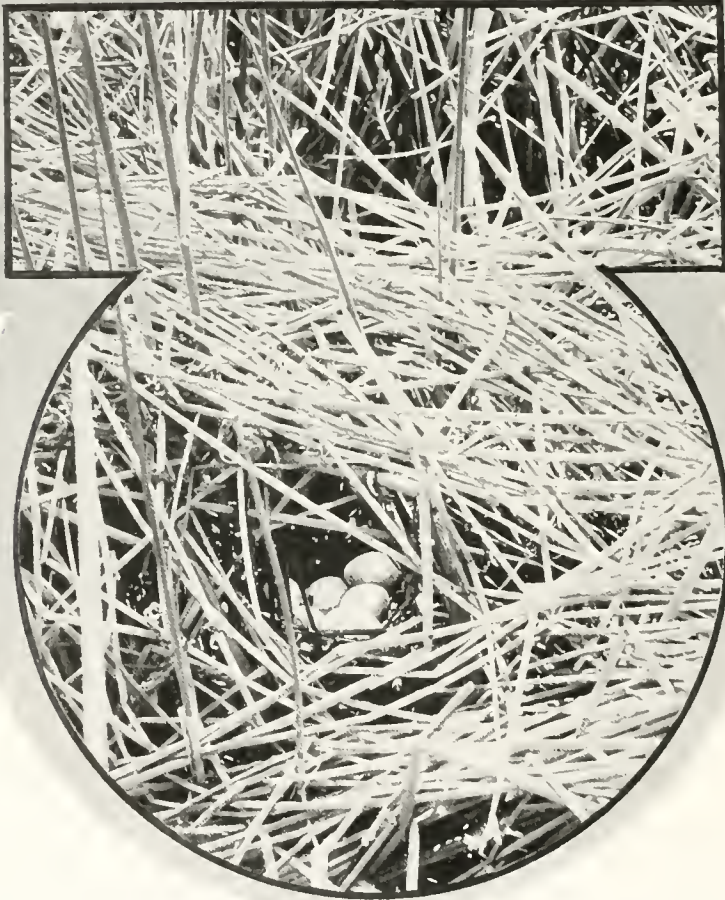
Range in Washington.—Not common migrant west of the Cascades; more common migrant and summer resident on the East-side.

Authorities.—*Erismatura rubida*, Lawrence (R. H.), Auk, Vol. IX, Jan. 1892, p. 42. Rh. D². J.

Specimens.—U. of W. P. Prov. C.

IT is reported of a South Sea missionary that, when approached by a band of cannibals brandishing spears of sharks' teeth, instead of fleeing in terror, he ran forward and embraced the chief, with such show of friendliness that he completely won the savage heart. In such manner the

Ruddy Duck would conquer the heart of the sportsman: for when approached by the swift-urging punt, instead of flying at fair range and inviting attack, he waits in mild-eyed curiosity until the sportsman's ardor is lost in shame and admiration. His flesh, therefore, has been generously voted "tough" and "stringy"; and you must *not* shoot a Ruddy, please!



Taken in Douglas County.

Photo by the Authors.

NEST AND EGGS OF THE RUDDY DUCK.

These birds are chiefly characterized by a certain jauntiness of bearing quite in keeping with their bewitching chunkiness. They ride the water like corks, and their tails are most frequently cocked up, wren-fashion. These saucy tails are composed of stiff, spiny feathers having shafts denuded toward the tips, more or less, according to season, so

that the birds are popularly known as Pintails, Sprig-tails, Quill-tails, Spine-tails, etc., in confusion with *Daifila acuta*, which owes its common name not to the stiffness but to the graceful length of its caudal appendage.

Besides being always fat when in good condition, the garments of these birds are made extra thick so that they may spend a great deal of time under water. Altho not quite so agile as the Bufflehead at the



Photo by W. L. Dawson.

RUDDY DUCK'S NEST.
NEARER VIEW OF THE PRECEDING.

moment of diving, they are excelled by no other duck in their powers of endurance under water, diving rather than flying when harassed, and emerging at great distances.

A drake which I once quietly followed about in a canoe upon a Douglas County lake in nesting time, seemed rather to enjoy the game, altho he was more sophisticated than some. The first thing to observe in addition to his striking general beauty, chestnut plumage relieved by black and white

on head and neck, was the brilliant cobalt hue of his bill. It was not merely blue, but a glowing blue. He dove repeatedly and emerged each time radiant with beaded moisture. And as he warily passed our bows, he paused now and again to make gestures whose significance, whether of fear or defiance, I could not well determine, altho I suspect the latter. He first reared his head and tail to the utmost, straight up and parallel to each other; then let his head subside by spasmodic jerks, as tho he were a bag of wind and somebody were deflating him by successive raps upon the head. Each subsidence was accompanied by a little grunt, and to conclude the whole he thrust his head suddenly forward with a grunt louder than all; thus: *chut - chut - chut - chut - chclub*. It was a proper ridiculous performance from a human standpoint, but I suppose if I had been a drake Ruddy, I should have flown into a pretty passion and given him a drubbing for his impudence. This particular bird was a fat rascal, for when he tired of issuing vain challenges, he took to wing, and as he did so, altho aided by a light breeze, he found it necessary to patter upon the surface of the water for at least a hundred feet before he cleared.

Ruddy Ducks nest in small numbers upon some of our interior lakes. During the nesting season the female is excessively timid and may not often be seen—never in the vicinity of her nest. The male, on the contrary, spends much of his time in the open water hobnobbing with grebes and Redheads, and seems to have about as important business as the average politician. The nest is hidden in the reeds of some low island or marshy brink. The birds are said to occupy old Coot's nests at times and at others to build up very handsome structures of their own, raising the eggs a foot or so above the surface of the water; but the nest here figured was placed upon the wet muck of a swampy island in Moses Lake.

No greater surprise could be devised in oölogical duckdom than the egg of a Ruddy Duck. With surface rough and chalky where others are oil-finished, dead white where others are tinted, it is still the extraordinary size which provokes astonishment. The bird is notably small as ducks go, altho of a compact and stocky build, but the egg is easily the largest of inland duck eggs, not excepting those of the Canvasback. On this account it might readily be believed that six should constitute a set, as in this instance; but we are told that they sometimes deposit as high as eleven and even fourteen.

As might be expected the young are very large when first hatched, and, according to Allan Brooks, at once begin diving for their food, unlike all other young ducks, which glean from the surface for several weeks.

No. 331.

LESSER SNOW GOOSE.

A. O. U. No. 169. **Chen hyperborea** (Pall.).**Synonym.**—WHITE BRANT.

Description.—*Adult:* Entire plumage, except the primaries and their coverts, pure white; head and neck often heavily tinged with rusty; primaries blackish and with dark shafts on exposed portions, grayish and with white shafts basally; primary coverts gray with dark shafts; bill short, stout, with widely gaping commissure, showing black edges of mandibles, said to be purplish red in life, drying dull orange, nail white; feet and legs (drying) orange-red. *Immature:* Head and neck pale gray; back and wings, except quills, gray, varied by mesial dusky and marginal whitish, notably on wing-coverts and tertiaries; remaining plumage white. Length about 25.00 (635); wing 16.00 (406.4); tail 6.00 (152.4); bill 2.00-2.15 (50.8-54.6); tarsus 3.00 (76.2); middle toe and claw 2.30 (58.4).

Recognition Marks.—Brant size; pure white plumage with conspicuous black primaries (hence not difficult to determine on the wing).

Nesting.—Does not breed in Washington. *Nest:* of grasses and down on the ground. *Eggs:* 2-6, soiled whitish. Av. size, 3.13 x 2.12 (79.5 x 53.9).

General Range.—Pacific Coast to the Mississippi Valley, breeding in Alaska; south in winter to southern California and southern Illinois, casually to New England. Northeastern Asia.

Range in Washington.—Not common migrant both sides of the Cascades; winter resident, casually abundant, on Puget Sound.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle: Coues, Vol. II. p. 190.] *Anser hyperboreus*, Pallas, **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 760. T. C&S. Kk. E.

Specimens.—(U. of W.) Prov. B.N.

WHITE is a color of ill omen in a bird's plumage. It should typify purity; but it spells EASY MARK, instead, to the sportsman; and the sportsman under his various disguises has a long lead over the poet in this country. The color is, of course, highly protective in a region of snow and ice, such as this bird frequents in summer. Nor is it difficult to trace its protective significance in the case of Pelicans which sit along the margin of some lake, like windrows of alkaline froth; nor in that of certain sea-birds whose white is the mere embodiment of storm-tossed billows. But paint a game bird white and put the crazy notion into his noggin of wintering in California—the case is quite hopeless.

Of this bird's occurrence in California in the Fifties, Dr. Heermann wrote^a: "Frequents more especially the salt marsh districts, tho found also

a. Rep. Pac. R. R. Surv., Vol. X., p. 68.

inland. The food which they select in these localities gives their flesh a strong sedgy flavor, which causes them to be but little esteemed. These birds often cover so densely with their masses the plains in the vicinity of the marshes as to give the ground the appearance of being clothed with snow. Easily approached on horseback, the natives sometimes near them in this manner, then suddenly putting spurs to their animals gallop into the flock, striking to the right and left with short clubs and trampling them beneath their horses' feet. I have known a native to procure seventeen birds in a single charge of this kind thru a flock covering several acres."

It is difficult to frame any general statement either as to the distribution or abundance of the White Brant in Washington. Breeding, as they do, within the Arctic Circle, they yet forsake the high North in immense numbers to



Taken in San Francisco.

Photo by Walter K. Fisher.

LESSER SNOW GESE.

winter in southern California and the southwestern interior. They are, therefore, not uncommon migrants, especially in the fall, and they winter on Puget Sound in a very desultory fashion. During the severe winter of 1906-7 considerable numbers were reported from the upper Sound, but they were gone again by the middle of February. They also winter to some extent in the wheat country adjacent to the Columbia River, and are not uncommon thereabouts during migrations, in November and again in March and April.

Snow Geese dispense shrill falsetto cries as they fly about in companies of their own kind, or else mingle sociably with other species. Dr. Newberry says^a he has often seen a triangle of Geese flying steadily, high overhead, "composed of individuals of three species [*Chen hyperborca*, *Branta canadensis hutchinsii*, and *Anser albifrons gambeli*], each plainly distinguishable by its plumage, but each holding its place in the geometrical figure as tho it was composed of entirely homogeneous material, perhaps an equal number of the darker species, with three, four, or more pure, snow white geese flying together somewhere in the converging lines."

a. Rep. Pac. R. R. Surv., Vol. X., pt. IV., 1855, p. 101.

At Moses Lake and again on the Columbia River I have seen a single Snow Goose attach itself to a company of resident Canadas—in each case thru several days observation—appearing now alone and now in company with the larger birds. A specimen taken May 9th, 1907, at Wallula, was with three Canada Geese (one pair and a presumed “auntie”), and these were very reluctant to leave their fallen companion.

The Snow Geese feed almost entirely on grasses, which they pluck by main strength, after the familiar fashion of the domestic goose. In feeding on low grounds they bring up herbage, roots and all, and thus acquire a taste for certain bulbous roots, notably those of the sedges. The damage done by this species to wheat fields is inconsiderable, but they do occasionally bring away the grain with the blade in the case of tender sprouts.

The flesh of the Snow Goose, even in the younger examples, is tough and stringy, and it is not at any time to be compared with that of the *Branta canadensis* group.

No. 332.

AMERICAN WHITE-FRONTED GOOSE.

A. O. U. No. 171 a. *Anser albifrons gambeli* (Hartl.).

Synonyms.—LAUGHING GOOSE. GRAY BRANT. SPECKLED BRANT. SPECKLE-BELLY.

Description.—*Adult*: Forehead and region about the base of bill white,—the latter narrowly, and bordered immediately by dusky; remainder of head and neck all around warm grayish brown; the same color continued on back, fore-breast, and sides, but varied by lighter brownish gray tips of squarish-ended feathers, thus presenting a curious shingled appearance; underparts fading from grayish brown of breast to pure white posteriorly; the breast and belly irregularly spotted or heavily blotched with sooty black; the primaries grayish at base, blackening distally and with shafts mostly white; the tips of the greater coverts white, and the superior edges of the main course of side feathers (overlapping folded wing) also white; upper and lower tail-coverts, and lower belly well up on flank, and sides under folded wing, white; axillars and lining of wing uniform dusky; tail brownish dusky increasingly white-tipped on lateral feathers; bill orange-yellow with white nail; feet orange or reddish. *Immature*: “Similar to adult, but forepart of head dusky instead of white; lower parts without black markings, and nail of bill dusky” (Ridgw.). Length 27.00-30.00 (685.8-762); wing 16.85 (428); tail 6.40 (162.6); bill 2.10 (53.3); tarsus 2.91 (73.9).

Recognition Marks.—Large Brant size; speckled or black-blotched belly; rich grayish brown color; white partial mask of face.

Nesting.—Does not breed in Washington. *Nest*: on the ground, of dried grass or tundra moss, feathers, and down. *Eggs*: 6-7, dull greenish yellow, with obscure darker tints. Av. size, 3.10 x 2.30 (78.7 x 58.4).

General Range.—North America (rare on the Atlantic Coast), breeding far northward; in winter south to Cape St. Lucas, Mexico and Cuba.

Range in Washington.—Not common migrant. Locally and sparingly resident in winter.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle: Cones. Vol II. p. 191 f.] *A. gambelii*, Hartl., **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 762. T. C&S. Rh. Kk. B. E.

Specimens.—Prov.

GENERALIZATIONS in regard to the abundance of water fowl are becoming increasingly unsafe. We only know that they are diminishing in numbers at a frightful rate. Add to the fact that the population of the Pacific slope has multiplied tenfold in three decades, the further fact that the prospectors and miners of Alaska have begun to strike at the source of supply, and you have a condition to give statesmen pause. In the great grain fields of middle California these White-fronted Geese were formerly so abundant as to be a real menace to the crops, and to necessitate the constant vigilance of watchmen. But those days have passed, along with those in which the Wild

Pigeon darkened the eastern sun.

In the autumnal migrations the flight of these geese is chiefly coastwise. They move rapidly in great wedge-shaped companies with self-appointed leaders, and they fill the air with harsh, loud cries, rapid iterations of the syllable *wah*, from which they have won the name "Laughing Geese." These



Taken in San Francisco.

Photo by W. K. Fisher

AMERICAN WHITE-FRONTED GEESSE.

birds are in splendid condition in late September, having been fattened upon the abundant heath-berries of the Alaskan lowlands; and those which have pastured on California wheat are hardly less toothsome in spring, altho it is a shame to kill them at that season.

Apropos of an interest aside from the gastronomic, it is a pleasure to cite the example of the Commissioners of the Golden Gate Park in San Francisco. Here wild birds are not only protected but systematically fed, and as a result wild fowl have been attracted in large variety, some of them so rare that they are mere names to most naturalists. Thus on the occasion of a visit to Stow Lake, in the Park mentioned, early in January, 1906, Mr. Walter K. Fisher,

not only recorded^a the presence of seventeen species of ducks and geese, but secured excellent photographs at close range of four species of the latter, including the American White-fronted Goose. Mr. Fisher was astonished at such a lack of suspicion on the part of the wildest species, but careful investigation convinced him that these were genuine recruits from the wilderness, and they left in the spring without evidence of having been spoiled by hospitality. There's a policy which beats carnage! and it guarantees good sport too—fun for everybody, including the goose.

No. 333.

CANADA GOOSE.

A. O. U. No. 172. **Branta canadensis** (Linn.).

Synonyms.—"WILD GOOSE." COMMON WILD GOOSE. HONKER.

Description.—*Adult*: Head and neck glossy black; a large white triangular patch on either cheek, the two usually confluent on throat—occasionally an indistinct white collar at base of black; back and wings rich grayish brown; fore-breast and below lighter grayish brown, tipped with pale fulvous or grayish white; heavier toned on sides, where presenting a shingled appearance and shading into color of back; lower belly, under tail-coverts, longer upper tail-coverts and flanks well up on rump, pure white; rump and tail black; primaries blackening at tips; bill black; feet dusky. Tail 18-20-feathered. *Immature*: Similar, but white of cheeks and throat more or less mixed with blackish. Length 35.00-42.00 (88.9-106.8); wing 20.00 (50.8); tail 7.00 (17.8); bill 2.30 (5.8); tarsus 3.55 (9.0).

Recognition Marks.—Eagle size; black head and neck with white cheek-patches connected across throat, and large size distinctive.

Nesting.—*Nest*: on the ground, on a cliff, or in a tree (a deserted Osprey's nest and the like), lined with down. *Eggs*: 4-6, light greenish buff, or buffy white. Av. size, 3.52 x 2.30 (89.4 x 58.4). *Season*: April; one brood.

General Range.—Temperate North America, breeding in the northern United States and British Provinces; south in winter to Mexico.

Range in Washington.—Common migrant and winter resident east of the Cascades; locally abundant in winter in the Big Bend, Palouse, and Horse Heaven countries, and upon certain island refuges of the Columbia; also sparingly resident and breeding; occasionally taken on Puget Sound during migrations and in winter.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle: Coues, Vol. II, p. 192.] *Bernicla canadensis*, Boie, **Baird**, Rep. Pac. R. R. Surv. IX, 1858, pp. 764 & 765. T. C&S. L. Rb. D³. J. E.

Specimens.—Prov. E?

a. Bird-Lore, Vol. VIII., Nov. 1906, p. 192 ff.

HONK, honk—honk, honk! What a stirring sound is that which summons us from whatever task indoors, and hurries us out hatless, breathless, into the crisp March air to behold a company of Wild Geese passing forward into the frosty North! *Honk, honk!* We think madly of our gun upstairs, for the Geese are provokingly near, and we hear the thrilling swish of the low-sweeping wings; but we take it out in great boasts to our similarly hatless neighbor, of what we could have done if the gun had been put together and we had known that those foolish Geese were coming right over town. And



Taken in Douglas County.

Photo by the Author.

CANADA GEESE.

HATCHED FROM WILD EGGS BUT NOW THOROLY DOMESTICATED.

when the great birds become a row of trailing points on the northern sky, a fever of strange unrest burns within our veins, and we wonder thru what ancestral folly our wings were clipped, and our race condemned to unceasing barn-yard toil.

The Canada Goose has only two cardinal points on his compass, North and South; and unlike most migrants, he does not go by the map, nor follow favorite paths thru the air, but flies straight over hill and dale, city and hamlet alike, until the goal is reached, or until the weather discourages further movement for a time. The Geese move usually at a considerable height, forming open V-shaped figures, with the oldest or strongest gander in the lead at the apex; or else in single oblique lines. Each bird demands as clear a field as possible, and this is best secured by an arrangement which allows

each goose to look over the wing of the one next preceding, right or left, according to the branch of the V which it occupies. The line of march shifts and changes under the eye, as the hindmost birds become dissatisfied with their positions, and change sides, or as tired leaders give place to fresher birds; and the changes are accomplished not without much lordly discussion in high-pitched *honks*.

In Washington the typical honker is found chiefly east of the Cascade Mountains, and it is there a much more familiar object than is the related *P. c. occidentalis* in the Pacific Coast region. It formerly nested in fair abundance in the vicinity of all the larger lakes as well as by the rivers, but latterly it has been more and more nearly confined in its summer range to the valleys of the Columbia and the Snake with their larger tributaries. The islands and shores of the two rivers named have been dedicated by the State as an asylum for the Geese at all seasons, and their use of these sanctuaries both at nesting time and for winter roosting is very gratifying. The nesting birds, however, are but a tithe of the winter population and this in turn but a small per cent of the birds which pass on in fall and spring after they have had a taste of our Washington wheat.

Like all geese, this species feeds widely upon tender herbage, berries, sedge-roots, and such aquatic fare of plants and insects as may chance, but for a steady diet the Honker asks no better fare than the spilled grain of the Big Bend and Palouse wheatfields in the fall, or the tender sprouts of the Horse Heaven country in spring. The Geese are very regular about their meals, rising punctually at daybreak and flying inland to feed for two or three hours in the grain fields. The middle of the day is passed quietly about some pond or in the enjoyment of one-legged slumbers on the sand-bars of the Columbia. Hunger drives them to forage again late in the afternoon, usually at the same spot visited in the morning, and if undisturbed they may linger somewhat into the night. While in flocks, the Geese are exceedingly vigilant and wary, and to approach them within gunshot in the open is next to an impossibility.

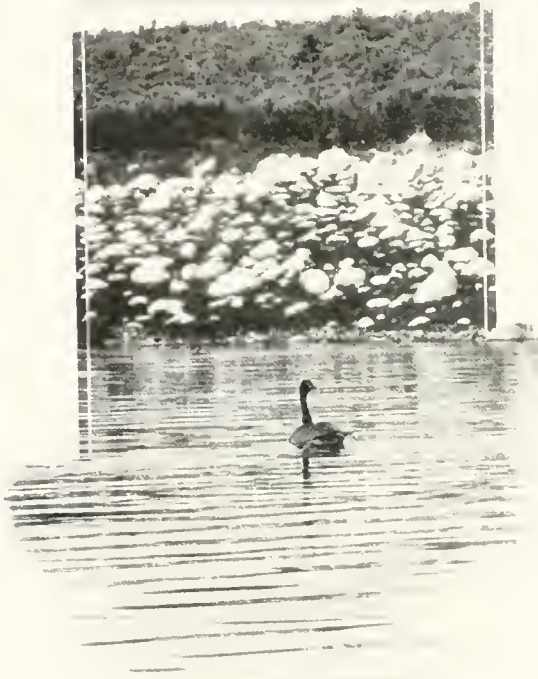
Their suspicion of all mankind is deeply planted and freshly watered, but the goose psychology works under several limitations. A lone Goose, for instance, having none to counsel him, appears at times to be quite incapable of making decision and allows the fatal approach of the hunter. The situation is still further compromised if the lone bird happens to alight among decoys. "It's plumb scandalous," reasons the bird, "the man is coming and these birds stand here like clods. But they ought to know; they were here first." And the real bird awaits his doom. Mr. Bowles once killed a perfectly able-bodied bird, under such circumstances, with a stone.

They are not afraid of cattle either, and a pasturing flock may sometimes be approached by a hunter who stalks beside a led horse or cow. Sometimes a young heifer will resent the intrusion of wild ducks or geese upon her

domain, and it is most amusing to see the astonished fowl scramble out of her way as she charges about and looks at them. Such a departure from the established order of things constitutes a quite unclassifiable phenomenon, and the birds never think of escape by flight.

Let a gunner come creeping along the ground on hands and knees and his guile is detected at half a mile, yet the self-same birds appear to have no conception of a danger which lies below the surface of the ground. Advantage is taken of this weakness thru the digging of shooting-pits in the wheat-fields of the Horse Heaven country. Tame birds or wooden decoys are put out and it makes no difference how many wild geese pass overhead, so the hunter keeps to his pit until the birds are settling.

Spring shooting unquestionably destroys many birds which would breed in this State, and operates to send the remainder northward along the gauntlet of gun-fire. It is especially regrettable in view of the fact that the resident birds are early nesters, mating as they do in March, and having the complement of eggs by the middle of April. A wheat-fed goose is excellent eating, and the problem of preserving some of this good fare for the next generation is worth the attention not only of lawmakers but of local granges and other farmers' organizations, without whose intelligent co-operation mere legislation is futile.



Taken on Moses Lake. Photo by the Authors.

MOTHER GOOSE.

SHE HAS SUCCESSFULLY DECOYED US FROM HER
BROOD AND IS ALLOWING A RARELY
CLOSE APPROACH.

Canada Geese nest chiefly upon the ground in water-side meadows, in rank grass or dead tules, in the sage brush, or even upon the rocks of river cliff or pebbles of river bars. The amount of materials assembled may vary greatly. A few sticks and grass-stems will hold the eggs in place on a flat stone, or a tasty pyramid of grasses and soft trash may support from four to nine greenish buffy eggs, deeply imbedded in down. In May, 1906, we found a nest in Moses Lake on the top of

a musk-rat's house, and an island was pointed out to us where eighteen pairs had nested in a sort of loose colony the previous season. In June, 1896, while riding near Oroville, I came upon two large Osprey's nests placed at a great height in cottonwood trees near the Okanogan River. The Ospreys were in possession at the time, but Mr. James Johnston, a farmer sportsman living in the vicinity, informed me that earlier the same season two pairs of Canada Geese had successfully reared their broods in the same nests.

The sitting Goose remains at her post for four weeks and she is attended by the gander who maintains a constant vigil at her side and accompanies her during the foraging trips. The goslings, when hatched, are covered with down of a bright grass green hue mottled with a shade of olive.

They swim, from the shell; and by the second or third day they have attained such robustness that their capture by hand from a boat is a very difficult matter. Hiding is the long suit of the mother Goose when in charge of a tender brood; and if surprised at such a time in open water she manages to "scotch" down and hug her feathers close until she does not appear above one-third her normal size. If the ruse is discovered she flees reluctantly and summons her mate who joins his anxious cries with hers, *Honku-honka-honka!*



Taken on Moses Lake.

Photo by the Authors.

A PLUCKY GOSLING.

THIS DUBIOUS SNAP-SHOT WAS OBTAINED ONLY AFTER A TWO-MILE CHASE.

No. 334.

HUTCHINS'S GOOSE.

A. O. U. No. 172 a. ***Branta canadensis hutchinsii*** (Rich.).

Synonyms.—LESSER CANADA GOOSE. LITTLE WILD GOOSE. GRAY BRANT.

Description.—Precisely similar to preceding species in coloration, but averaging smaller; tail normally 16-feathered. Length 25.00-34.00 (635-863.6); wing 17.00 (431.8); tail 6.00 (152.4); bill 1.75 (44.5); tarsus 3.00 (76.2).

Recognition Marks.—Brant to Eagle size; like preceding form but smaller.

Nesting.—Does not breed in Washington. *Nest:* on ground or in deserted nest of Hawk or Crow, lined with grass and leaves or not, and with abundant down. *Eggs:* 4-6, averaging lighter than those of *B. canadensis*. Av. size, 3.20 x 2.10 (81.3 x 53.3).

General Range.—North America, breeding in the Arctic regions, and migrating south in winter, chiefly thru the western United States and Mississippi Valley; northeastern Asia.

Range in Washington.—Common migrant, less common resident in winter, thruout the State; locally abundant east of the Mountains.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Coues, Vol. II, p. 192]? *Bernicla hutchinsii*, Bonap., **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 767. T. C&S. Rh. B. E.

Specimens.—Prov. E.



Taken in California.

Photo by W. K. Fisher.

HUTCHINS GEESE (WILD) IN GOLDEN GATE PARK.

The goose problem is all mixed up. It would be so much more convenient if the four races of *B. canadensis* were separated from each other by impassable mountain barriers. They must raise social barriers in nesting time; but in winter they are all too friendly, each to each, in Washington. Hear what a trouble a visiting ornithologist^a has with the situation: "Intergrades connect any series of Washington birds of this group so completely that it is impossible to class every individual by its size or coloration. Three specimens obtained from the same flock may be severally referred to *hutchinsii* and *occidentalis*, one of them being intermediate between *hutchinsii* and *occidentalis*, and another between *hutchinsii* and *minima*. All Canada Geese secured on my trip were secured at Nisqually in April and were migrants. If Mr. Fannin's statements were based on authentic records and specimens taken in the proper season, *canadensis* and *hutchinsii* breed in the same localities on the mainland, a state of affairs unknown east of the Rockies and inconsistent with their classification as it now stands in the books. The bulk of Pacific Coast specimens examined present a most puzzling constancy in their intermediate size coupled with an inconstancy of coloration which makes their classification by the most adjustable formula of little value."

This much at least is plain, that the *B. canadensis* type becomes dwarfed as we proceed in a northwesterly direction. The summer aspect of the species, therefore, is somewhat as follows: *Branta canadensis* occupies the interior of British North America including eastern British Columbia and the northern border states, including eastern Washington. *B. c. occidentalis* is a darker Pacific Coast form, having its center of abundance in western British Columbia, but extending as far north as Sitka, and intergrading with *C. typicus* along the eastern border of its range. *B. c. hutchinsii*, a dwarfing form, intergrades with *C. typicus* in northern British Columbia and in eastern Alaska, and occupies the southern portion of Alaska proper and the shores of Bering Sea. *B. c. minima* inosculates with *B. c. hutchinsii* along the northern borders of the latter's range, and extends thence northward to the limit of land. *Minima* not only dwarfs *hutchinsii*, but exhibits the same tendency to vary from it in pattern of coloration which *occidentalis* does from *typicus*. In plumage, therefore, *canadensis* proper and *hutchinsii* form one group, and *occidentalis* with *minima* another. But whereas there is evidence of intergradation between *c.* and *h.* there is no such evidence as between *o.* and *m.* This, of course, is "caviare to the general," and no offense! Shun it!

THESE little Geese are common on both sides of the mountains during migration, and a few winter. Except in the matter of wheat-fields, which are irresistible, the birds rather prefer the mud-flats and marshes for both bed and board. Because of their northern extraction, they are not so wary as the more experienced Canadas, and their honking is a little lighter in character; but further than this the scales and the tape must record all that is interesting in *hutchinsii* as over *canadensis*.

a. Samuel N. Rhoads in "The Birds Observed in British Columbia and Washington During Spring and Summer 1892." Proc. Acad. Nat. Sci. Phila. 1893, p. 34.

No. 335.

WHITE-CHEEKED GOOSE.

A. O. U. No. 172 b. *Branta canadensis occidentalis* (Baird).

Synonyms.—LARGER WHITE-CHEEKED GOOSE. PACIFIC GOOSE. WESTERN CANADA GOOSE. HONKER.

Description.—Similar to *B. canadensis*, but coloration darker, especially on underparts,—deep grayish brown abruptly defined against white of crissum; white half-collar at base of black on neck usually more distinct; white cheek-patches usually separated by black stripe, or at least black mottling, on central line of throat—shading into type by insensible gradations. Length about 35.00 (889); wing 16.50-18.00 (419.1-457.2); bill 1.60 (40.6); tarsus 3.20 (81.3).

Recognition Marks.—As in *B. canadensis*; darker.

General Range.—Pacific Coast district, breeding from British Columbia to Sitka; south in winter to California.

Range in Washington.—Not common winter resident and migrant on Puget Sound; relative abundance as compared with *B. canadensis* undetermined.

Authorities.—*Bernicla leucopareia* Cassin; also *B. occidentalis* (proposed) Baird, Baird, Rep. Pac. R. R. Surv. IX, 1858, p. 766. C&S. Rh. D? Kk. B. E(H).

ON the strength of a group of domesticated geese raised from eggs found on an island in the Okanogan River, I have numerously reported^a the Canada Geese of Okanogan County as belonging to this subspecies. It may be that they do, but in the absence of specimens I prefer to regard all East-side birds as presumptive *canadensis* and to restrict *occidentalis* to the north-west coast district, which it exclusively occupies in summer.

Previous to the complete occupation of the Puget Sound region by the white man, Geese nested to some extent on the shores of the prairie lakes in Pierce County and elsewhere. There are no recent records, however, and the White-cheeked Goose of today would appear to be limited to the northern portion of its breeding range in British Columbia. This "saturated" form is not strongly established, and it may be only a question of time before its ultimate disappearance.

a. Auk, Vol. XIV., Apr. 1897, p. 172, etc.

No. 336.

CACKLING GOOSE.

A. O. U. No. 172 c. *Branta canadensis minima* Ridgw.**Synonyms.**—GRAY BRANT. LEAST CANADA GOOSE.**Description.**—In coloration exactly like *B. c. occidentalis*, but much smaller; tail normally 14-16 feathered. Length 23.00-25.00 (584.2-635); wing 13.00-14.50 (345.4-368.3); bill .95-1.15 (24.1-29.2); tarsus 2.40-2.75 (61-69.9).**Recognition Marks.**—Size of Mallard; gray coloration; smallest of the Canada Geese.**Nesting.**—Does not breed in Washington. *Nest:* on the ground, of weeds and grasses, lined with down. *Eggs:* 4-9, buffy or greenish-buff. Av. size, 2.90 x 1.95 (73.7 x 49.5). *Season:* June-July.**General Range.**—Western North America chiefly coastwise; breeding in western Alaska (Yukon Delta, etc.); south in winter to California and irregularly eastward to Colorado and even the Mississippi.**Range in Washington.**—Not common winter resident and migrant on Puget Sound.**Authorities.**—Rhoads, Auk, X, Jan. 1903, p. 17.**Specimens.**—Prov.

OF the Cackling Goose as a resident of Washington we know surprisingly little. It appears to migrate regularly to California and should occur regularly not only upon the Sound but in the interior of the State. Doubtless it is often overlooked, or lumped in with Hutchinses as "Gray Brant." I have seen it but once, February 4, 1905, a group sitting on a floating log in Elliot Bay.

As typical of nesting conditions in that romantic Northland toward which our thoughts are ever tending, I quote at length from Nelson^a:

"This is the most common and generally distributed goose found breeding along the Alaskan coast of Bering Sea. From the sea-shore its breeding ground extends along the courses of the great rivers far into the interior. During the summer of 1881 they were found in abundance about the head of Kotzebue Sound, and were seen at various points along the Arctic coast to the vicinity of Point Barrow; so there is no doubt that its breeding ground reaches thus far.

"In the vicinity of Saint Michaels and the Yukon mouth these are the first geese to arrive in spring; the first come from the 25th to the 30th of April, but the main body do not arrive until from May 5 to 20, according to the season. The first goose of the season is hailed with delight by both natives and white residents, who set to work repairing their guns and make ready for

a. E. W. Nelson, Rep. on Nat. Hist. Colls. Made in Alaska (1887), p. 86.

the welcome change from a diet of fish eaten all through the winter to geese, which soon becomes the staple.

"As May advances and one by one the ponds open, and the earth looks out here and there from under its winter covering, the loud notes of the various wild fowl are heard, becoming daily more numerous. Their harsh and varied cries make sweet music to the ears of all who have just passed the winter's silence and dull monotony, and in spite of the lowering skies and occasional snow-squalls every one makes ready and is off to the marshes.

"The flocks come cleaving their way from afar, and as they draw near their summer homes raise a chorus of loud notes in high-pitched tone like the syllable 'luk,' rapidly repeated, and a reply rises upon all sides, until the whole marsh re-echoes with the din, and the new-comers circle slowly up to the edge of a pond amid a perfect chorus raised by the geese all about, as if in congratulation.

"Even upon first arrival many of the birds appear to be mated, as I have frequently shot one from a flock and seen a single bird leave its companions at once and come circling about, uttering loud call-notes. If the fallen bird is only wounded its mate will almost invariably join it, and frequently allow itself to be approached and shot without attempting to escape. In some instances I have known a bird thus bereaved of its partner to remain in the vicinity for two or three days, calling and circling about. Altho many are mated, others are not, and the less fortunate males fight hard and long for possession of females. I frequently amused myself, while at the Yukon mouth, by watching flocks of geese on the muddy banks of the river, which was a favorite resort. The females kept to one side and dozed, or dabbled their bills in the mud; the males were scattered about, and kept moving uneasily from side to side, making a great outcry. This would last but a few minutes, when two of the warriors would cross each other's path, and then began the battle. They would seize one another by the bill, and then turn and twist each other about, their wings hanging loosely by their sides meanwhile. Suddenly they would close up and each would belabor his rival with the bend of the wing, until the sound could be heard two or three hundred yards. The wing-strokes were always warded off by the other bird's wing, so but little damage was done, but it usually ended in the weaker bird breaking loose and running away. Just before the males seize each other they usually utter a series of peculiar low growling or grunting notes.

"The last week of May finds many of these birds already depositing their eggs. Upon the grassy borders of ponds, in the midst of a bunch of grass, or on a small knoll these birds find a spot where they make a slight depression and perhaps line it with a scanty layer of grasses, after which the eggs are laid, numbering from five to eight. These eggs, like the birds, average smaller than those of the other geese.

"As the eggs are deposited the female gradually lines the nest with feathers plucked from her breast until they rest in a bed of down. When first laid the eggs are white, but by the time incubation begins all are soiled and dingy. The female usually crouches low on her nest until an intruder comes within a hundred yards or so, then she skulks off through the grass or flies silently away, close to the ground, and only raises a note of alarm when well away from the nest. When the eggs are about hatching, or the young are out, both parents frequently become perfectly reckless in the face of danger."

No. 337.

BLACK BRANT.

A. O. U. No. 174. **Branta nigricans** (Lawr.).

Description.—*Adult*: Head and neck all around, and chest, glossy black, shading into sooty brown on back and wings, into sooty black or deep slate on underparts; remiges and tail black; an incomplete white collar on upper neck, broadest on sides, interrupted behind, and occasionally in front; upper tail-coverts and crissum white in strong contrast to surrounding parts. Bill and feet black; iris brown. *Immature*: Like adult but white collar indistinct or wanting; greater coverts and secondaries broadly tipped with white; sides and flanks brownish gray. Length of adult: 22.00-29.00 (558.8-736.6); wing 12.75-13.50 (323.9-342.9); bill 1.28 (32.5); tarsus 2.40 (60.9).

Recognition Marks.—Standard of Brant size; black coloration with strongly contrasting white of upper tail-coverts (and crissum) distinctive.

Nesting.—Does not breed in Washington. *Nest*: a depression in ground, heavily lined with down. *Eggs*: 4-8, grayish. Av. size, 2.80 x 1.75 (71.1 x 44.5). *Season*: June-July; one brood.

General Range.—Breeding in western Arctic America and on *terra incognita borealis*; south in winter along the Pacific Coast to Lower California; also casually east to the Mississippi and the Atlantic Coast.

Range in Washington.—Abundant migrant and common in winter on the West-side—found only on salt water.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle: Coles. Vol. II. p. 191.] *Bernicla nigricans*, Cassin, **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 768. C&S. L. Rh. B. E.

Specimens.—Prov. BN.

AS matter of fact Black Brants are the only Geese one is quite sure of seeing from the deck of a steamboat on an average winter day on Puget Sound. While they have their favorite feeding grounds upon the mud-flats and in shallow bays, they are widely distributed over the open water also, and their numbers during the spring migrations are such that not all other wild geese put

together are to be mentioned in comparison. They sit the water in small companies and altho they are exceedingly wary in regard to rowboats, they often permit an approach on the part of steamers which is very gratifying to the student. An exaggerated use of their long wings as the birds get under way gives the beholder the impression of great weight—an impression which is not sustained in the hand, where the bird is seen to be disappointingly light, all feathers, in fact, as compared with a chunky Scoter, which does not equal it in extent of wing by a foot or more.

The pursuit of the Brant is, of course, a much less simple matter than formerly. When the use of motor-boats is forsworn (and it is not always, in spite of the law's requirement), recourse must be had to decoys and blinds, or else dependence placed in the casual carelessness of passing birds. The Goose is no such "goose" in spite of many fables, and *Branta* is adding a good many convolutions to his cerebral hemispheres in the course of his contest with man. The honest sportsman probably earns what he gets and if only adequate protection may be secured to the birds in their breeding haunts, we shall have tastes of wild goose for some years to come.

Black Brants with us are exclusively maritime, and their food consists largely of sea wrack, for which the birds not only dip but dive as well. This vegetable diet is supplemented by whatever comes handiest in the way of small crustaceans, sea-worms and shell-fish. The flesh, on this account, is never equal to that of wheat-fed Canadas, and by spring it frequently rates no higher than that of Coots.

From the esthetic standpoint the most interesting phase of Brant life is the mellow *cronk, cronk, cronk*, which the birds frequently emit whether in flight or at rest. From the back bay near Dungeness in April rises a babel like the spring offering of a giant frog-pond, a chorus of thousands of croaking voices, among which the thrilling basso of bull frogs predominates.

The Black Brant nests altogether within the Arctic Circle, and altho eggs have been taken at Cape Bathurst and Point Barrow, it is surmised to breed still more extensively in some undiscovered land far to the north of the last-named promontory.

No. 338.

FULVOUS TREE DUCK.

A. O. U. No. 178. *Dendrocygna bicolor* (Vieill.).

Description.—*Adult male and female:* General color yellowish brown or pale cinnamon, darker on head, nearly uniform on underparts, but flanks striped with lighter fulvous; a black central stripe on hind-head and neck; upper back and

scapulars black, the feathers edged with fulvous; rump plain black; tail black; lesser wing-coverts chocolate, remainder of wing, including remiges, black; upper and lower tail-coverts pale creamy white. Bill bluish black; feet slaty; iris brown. Length about 20.50 (520.7); wing 8.00-9.50 (203.2-241.3); bill 1.50-1.90 (38.1-48.3); tarsus 2.25 (57.2).

Recognition Marks.—Small Mallard size; light cinnamon coloration; long legs; "arboricole" habits.

Nesting.—Not known to breed in Washington. *Nest*: Various: in hollow of tree lined with feathers, or on ground in swamp, of grasses, etc., lined with down. "*Eggs* indefinitely numerous, 17 to (in one nest) 32, also sometimes laid in nests of other Ducks, and of Coots; size 1.35-1.65 x 1.98-2.20 [34.3-41.9 x 50.3-55.9]; shell dead white, somewhat rough, not as elliptical as usual in this family; laid late in June or in July" (Cones).

General Range.—Of remarkable and discontinuous distribution. Southwestern North America, southern South America, Africa, India; in North America breeding from Louisiana west to California and north (at least) to Nevada, wintering in the southern portion of its range and in Mexico. Casual in North Carolina, Missouri, British Columbia (Vancouver Island) and Washington.

Range in Washington.—Accidental on Gray's Harbor—one record.

Authorities.—Dawson, Auk, Vol. XXV. Oct. 1908, p. 485.

Specimens.—Prov. C.

THIS species is normally confined to the southwestern portion of the United States and to South America, not having previously been taken north of Nevada; but on the 29th of November, 1905, five were taken from a flock of eleven at Alberni, Vancouver Island, by Mr. J. S. Rollin, a rancher. One of these specimens, a drake, is now in the Provincial Museum at Victoria.

Four days later another specimen was taken from a flock of ten on Gray's Harbor, by Mr. Willis G. Hopkins, of Aberdeen. The bird was mounted by Fred Edwards and Company, of Tacoma, and is now in Mr. Hopkins' possession.

It is well known that certain kinds of birds, notably the Herons, wander Northward at the close of the nesting season. Whether this is due to an incipient migratory instinct working backwards, or whether the birds simply decide to take a vacation, we may not know. On the whole the appearance of these two flocks of southern ducks upon our northern shores would seem to be an illustration of this fortuitous wandering rather than evidence of northerly breeding.

Those who saw these ducks on Gray's Harbor were struck with their peculiar appearance in flight, and especially by their prevailing redness, altho at close quarters their colors are seen to be made up rather of soft melting browns and tawny yellows.

No. 339.

WHISTLING SWAN.

A. O. U. No. 180. *Olor columbianus* (Ord.).

Description.—*Adult*: Entire plumage pure white, the head sometimes tinged with rusty; bill and lores black, the latter usually with a distinct yellow spot near eye; feet and legs black. *Immature*: Plumage ashy gray, the head and neck tinged with brownish; bill and feet light. Length about 54.00 (1371.6); extent seven feet; wing 31.25 (539.8); tail 8.50 (215.9); bill 4.00 (101.6); tarsus 3.90 (99.1); middle toe and claw 5.40 (137.2).

Recognition Marks.—Brant size; pure white plumage; long neck; small yellow spot on lores distinctive for this species.

Nesting.—*Nest*: on the ground or upon loose heap of sticks and trash, lined with mosses, grass, and down. *Eggs*: 2-5, sordid white. Av. size, 4.22 x 2.70 (107.2 x 68.6). *Season*: April-June; one brood.

General Range.—The whole of North America, breeding far north. Commander Islands, Kamschatka; accidental in Scotland.

Range in Washington.—Not common migrant; formerly bred in some numbers on the lakes of eastern Washington, where a few pairs still linger in summer. In danger of extermination.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Coues, Vol. II, p. 192 f.] *Cygnus americanus* Sharpless, **Baird**, Rep. Pac. R. R. Surv. 1860, p. 758. T(?). C&S. L. Rh. E.

Specimens.—Prov. B.N. E.

NO fitter emblem of purity and grace will ever be found than this matchless daughter of the wilderness, the American Swan. If we are impelled to admire the stately beauty of the domestic bird, as it moves about some narrow duck-pond of our own contriving, how much more shall we yield tribute of admiration to this native princess, spotless and untamed. It is to be feared that our fathers set a higher value upon the gastronomic qualities of the Swan than upon its marvelous purity of plumage or majesty of motion. At any rate early accounts abound with estimates of avoirdupois, and directions for "hanging out" the bird's carcass for a given length of time, in order to fit it for the table; but they had less to say of the flashing splendors of the white-winged fleet, as they passed overhead in their semiannual regattas.

During migrations the Swans move in small flocks, forming a "flying wedge," or V-shaped figure, with some trusted patriarch in the lead. Their flight is exceedingly swift, being estimated by competent observers at one hundred miles per hour—probably twice that of the Geese. For all they are so powerful on the wing, they rise from the water rather reluctantly, and prefer,

if there is room enough, to distance pursuit by swimming. Because the neck of the Swan is so long and hung at the water-line, the bird can explore the bottom freely in shallow waters in its search for roots and molluscs, without making any ungainly motions with the body. Indeed, there is a peculiar disconnectedness between the operations of the Swan proper and its far-reaching head,—as tho here were a white boat serenely floating at anchor, from the bow of which now and then a diver is sent down to grapple for hidden treasure. All the bird's motions above water are graceful enough, except in case of anxious inquiry, when the neck is stretched to its utmost, perpendicularly, as it pauses in dread expectancy, and the bird looks like a



Photo by the Author.

LAKE CHELAN.
AN ANCIENT HAUNT OF THE WILD SWAN.

white eighth-note of the musical scale, set upon a staff of widening ripples. Ashore, its gait is a rather ungainly waddle, the foot being folded and lifted unco high at every step.

The Whistling Swan is a noisy bird at best. A flock of them exhibit great individual variations of notes, and they can create a chorus which is mildly worse than that of a political jollification meeting. The bass horns, of tin rather than brass, are blown by the old fellows, while the varied notes which seem to come from clarionets, are really due to cygnets. The birds set up a great outcry when they have done anything, or are about to do anything, important, as when preparing for the flight northward, or when welcoming a company of their fellows to the feeding grounds.

The Whistling Swan has undoubtedly nested in Washington in some

numbers and possibly does so yet. It has been reported to me as breeding on the shores of the Omacne Lake in Ferry County, and in May, 1906, we found a nest on a tule tussock of Moses Lake, which we thought might have been occupied earlier in the season. The nest is always made near water, and consists of a large accumulation of grass, leaves, tule stems, and trash, with a plentiful lining of down from the bird's breast. From two to seven large yellowish white eggs are laid early in March(?), and the female is obliged to cover them for a matter of forty days. Both parents are exceedingly zealous in defense of their young, and a sitting Swan will sooner fly at an intruder in a passion, than away from him in fear. A stroke of a Swan's wing has been known to break a poacher's leg.

How any one nowadays can be so bereft of reason as to wish to destroy forever this vanishing vision of beauty, it is impossible to conceive. Its flesh is edible, but so, unquestionably, is human flesh, the eating of which our ancestors discontinued some time since. Yet within the year a local sportsmen's review had to report the killing of five Swans by a single individual in one wild lustful hour. Did you ever see a wild Swan? No; ten to one you never did! Ask this slayer of virgins, this valiant pot-hunter, this cave-dweller, this charcoal sketch of a man, why you have not and shall not.

No. 340.

TRUMPETER SWAN.

A. O. U. No. 181. **Olor buccinator** (Rich.).

Description.—Similar to preceding species, but larger; bill and lores entirely black. Length 60.00-66.00 (152.4-167.6.4); extent about 8 feet; wing 24.00 (609.6); tail 9.00 (228.6); bill 4.50 (114.3); tarsus 4.40 (111.8); middle toe and claw 6.00 (152.4).

Recognition Marks.—As in preceding species. Distinguished from it by absence of yellow on lore, and by nostril in basal half of bill.

Nesting.—Like that of preceding species, but eggs a little larger. Av. size, 4.40 x 2.92 (113.3 x 74.2). Not known to breed in Washington.

General Range.—Chiefly the interior of North America from the Gulf Coast to the Fur Countries, breeding from Iowa and the Dakotas northward; west to the Pacific Coast; rare or casual on the Atlantic.

Range in Washington.—Rare migrant. There are no recent *specimens*.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle; Coues Vol. II. p. 192.] *Cygnus buccinator*, Rich., **Newberry**, Rep. Pac. R. R. Surv. VI. pt. IV. 1858, p. 100. T. C&S. Rb. D? (?). B.

Specimens.—(U. of W.)

IN comparison with its whistling congener, the Trumpeter Swan is the larger, as it is everywhere the rarer bird. Audubon tells of one which was nearly ten feet in alar expanse, and which weighed above thirty-eight pounds. The names "Whistler" and "Trumpeter" are not meant to express a difference in kind in the notes of the two birds, so much as a difference in volume. The Whistler blows a penny trumpet and the Trumpeter a trombone. The pre-eminence of the latter as a musician is due to the fact that he keeps an extra coil of windpipe neatly tucked away within a convenient hollow of his breast-bone.

There is no well authenticated instance of the recent occurrence of the Trumpeter Swan in Washington, altho Samuel N. Rhoads^a, in 1892, surmised that half a dozen birds seen at Nisqually were of this species. Indeed, the entire Trumpeter tradition is now yellowed with age and speaks of a time when such wonders as wild swans were much more common.

"The bird is undoubtedly an inhabitant of Washington and Oregon Territories. It is, like the preceding species, more abundant on the Columbia River than on Puget Sound. In the winter of 1853-'54, I noticed immense flocks of Swans, apparently of this species, collected along the shores of the river mentioned, and spread out along the margin of the water for a distance varying from an eighth to a quarter of a mile" (Suckley)^b.

"Before we left the Columbia, early in November, the Swans had begun to arrive from the North, and frequently while at Fort Vancouver their trumpeting call drew our attention to the long converging lines of these magnificent birds, so large and so snowy white, as they came from their northern nesting places, and screaming with delight at the appearance of the broad expanse of water, perhaps their winter home, descended into the Columbia" (Dr. J. S. Newberry)^c.

No. 341.

WHITE-CRESTED CORMORANT.

A. O. U. No. 120 b. **Phalacrocorax auritus cincinatus** (Brandt).

Synonyms.—WESTERN DOUBLE-CRESTED CORMORANT. SHAG.

Description.—*Adults in breeding plumage:* General color glossy greenish black; the back and wings slaty brown, each feather bordered narrowly with greenish black; a tuft of narrow, filamentous, white feathers on each side of crown over and behind eye; tail of *twelve* feathers; bill yellow, blackening on culmen; gular sac and lores orange-yellow; eyelids and lining of mouth livid

a. Proc. Acad. Nat. Sci. Phila. 1893, p. 35.

b. Rep. Pac. R. R. Surv. XII., Book II., p. 249.

c. Rep. Pac. R. R. Surv. VI., pt. 1V., p. 100.

blue; irides Nile green; feet black. *Adults in winter*: Without black crests on head, and colors of soft parts duller. *Young male* (?): Head, neck and fore-breast grayish brown, lighter below and on sides, darker on crown and behind; remaining underparts, lower back, etc., rich dark brown; back and wings much as in adult; gular pouch yellowish. *Young female* (perhaps young of the year of both sexes): Like preceding but still lighter; back and wings hoary grayish brown, bordered with lighter brown. Length of adult about 36.00 (914.4); wing 13.70 (348); bill 2.40 (61); tarsus 2.35 (59.7).

Recognition Marks.—Eagle size; black plumage; orange gular area best field mark for species.

Nesting.—*Nest*: of sticks (usually water-worn beach-drift), scantily or not at all lined with feathers and trash, placed on ridge or crest of rocky islet. *Eggs*: 4, greenish blue as to ground, roughly and irregularly overlaid with chalky deposit, elliptical ovate in shape. Av. size, 2.45 x 1.40 (62.2 x 35.6). *Season*: May; one brood.

General Range.—Northwest coast of North America, breeding coastwise from Washington to Alaska; south in winter to California.

Range in Washington.—Breeding in fair numbers, chiefly in colonies, upon the Olympiades only; not common winter visitor on Puget Sound.

Authorities.—*Graculus dilophus*, Gray, **Baird**, Rep. Pac. R. R. Surv. IX., 1858, 878. C&S. Rh. Kb. B. E.

Specimens.—Prov. C.



From a Photograph, Copyright, 1907, by W. L. Dawson.

NORTH ROCK — OFF HOH HEAD.

A COLONY OF SOME 200 WHITE-CRESTS OCCUPIES THE SUMMIT OF THIS ROCK.



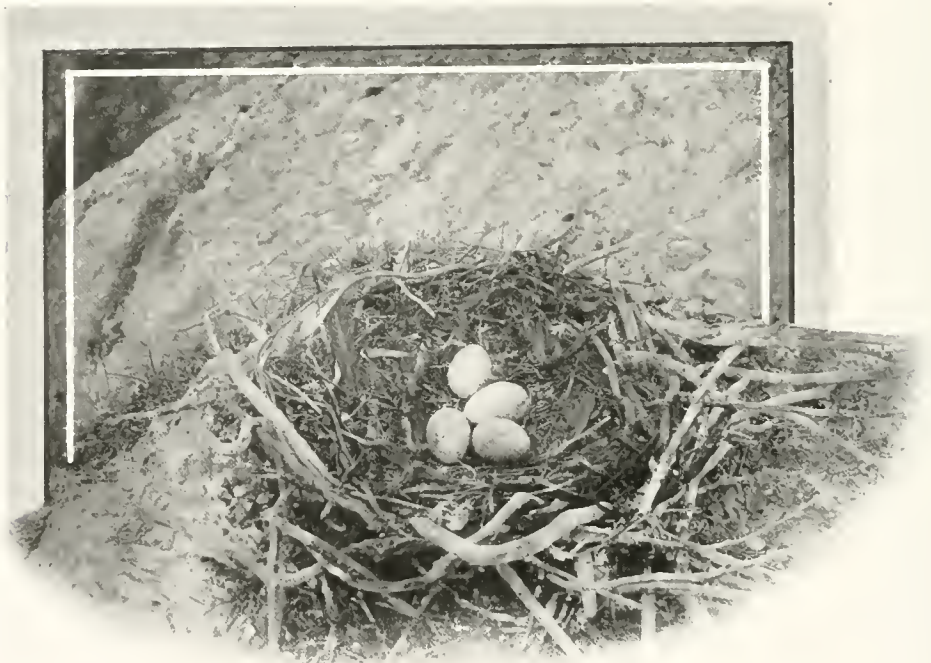
Taken on Carroll Islet.

WHITE-CRESTED CORMORANT.

Photo by the Author.

LANDSMEN are slow to realize the fertility of the sea. Its great expanse is so little broken at the surface by the irruption of life, that we cannot easily comprehend the vast and varied resources either of its depths or of its teeming shallows. The Gulls, the Gooneys, and the Man-of-War Birds serve to heighten this superficial impression which we get of ocean's scanty fare, for we find them travelling a league for a bite, and a day's journey for a full meal. Not so, however, with the Cormorant. Here is a bird the very symbol of voracity, built to seize and swallow and speedily digest. When we see him and know his ways, we realize the long-suffering of the great mother, and the boundless provision she has made for her hungry children.

Cormorants of thirty-five species range along the hundred thousand leagues of earth's shore-line, well distributed in all save Arctic and Antarctic waters; and they constitute the mightiest race of fishers ever known, save those born of the teeming waters themselves. The piscatorial peculations of men are as a dot beside their unceasing pillage; yet we do not begrudge the Cormorants the exercise of their ancient rights. Their tastes are less fastidious than ours, and there are still more fish in the sea than ever were caught.



Taken on the Grenville Arch, one of the Olympiades.

Photo by the Author.

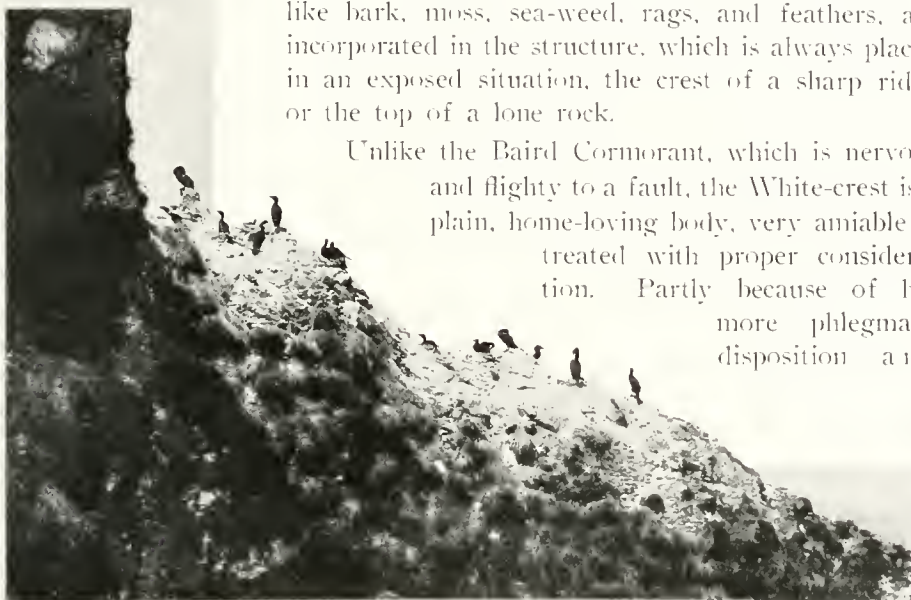
NEST AND EGGS OF THE WHITE-CRESTED CORMORANT.

Our own cormorants are to be found chiefly upon the Olympiades (pronounced *Olympiah' deez*), and in the coastal waters, where alone birds of this white-crested species breed. A few colonies of Baird Cormorants exist on the islands of the lower Sound, but the White-crest occurs only in the winter season, and then in limited numbers, east of the entrance to the Straits of Juan de Fuca.

White-crests usually prepare their complement of eggs during the first week in May, and therefore are the earliest nesters of the three local species. The nests are invariably built of sticks, chiefly those culled from the beach.

There is no proper lining, but various soft substances, like bark, moss, sea-weed, rags, and feathers, are incorporated in the structure, which is always placed in an exposed situation, the crest of a sharp ridge or the top of a lone rock.

Unlike the Baird Cormorant, which is nervous and flighty to a fault, the White-crest is a plain, home-loving body, very amiable if treated with proper consideration. Partly because of her more phlegmatic disposition and



Taken on Corroll Islet.

Photo by the Author.

A RIDGE COLONY.

partly, no doubt, because most of the eggs have hatched by June (which is as early a date as one cares to select in visiting this region of heavy rainfall), it is often possible to get very close to brooding birds of this species. The photograph shown in the full-page plate was taken at ten feet, and I have declined opportunities at four feet simply because the bird would not go on the plate.

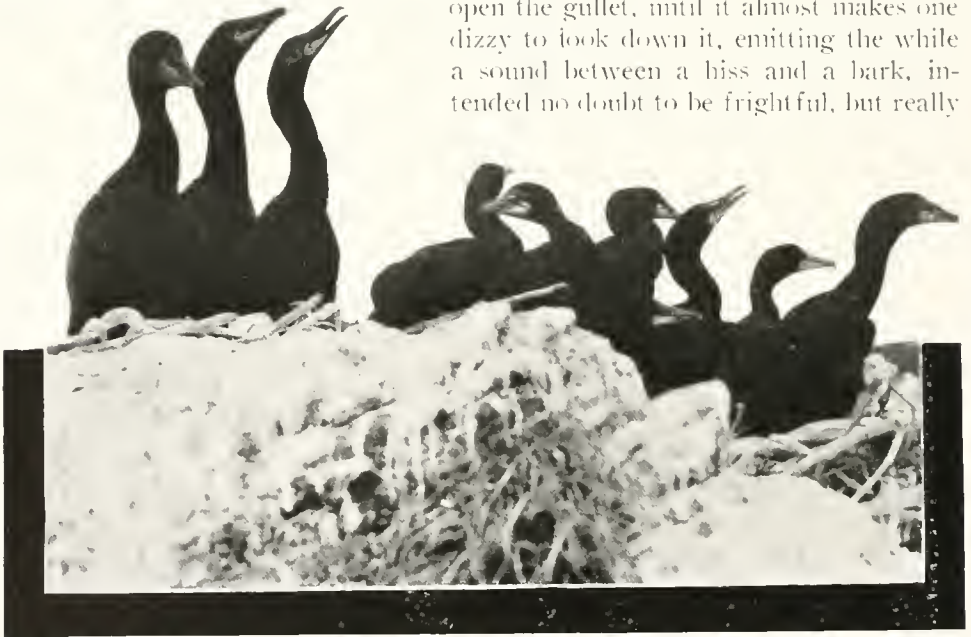
In spite of the filthy surroundings of her nest, the Shag is not uncleanly in personal appearance, and her sleek shininess is doubtless due in large measure to her frequent ablutions. The bird's eye is of a handsome blue-green (rather an unusual color among birds), and its hue matches to a nicety

the "trimmings" at the base of the bill. As incubation advances the white nuptial crests are shed, and I have seen no trace of these marks in any specimens examined in June or July.

A typical Cormorant rookery is, of course, foul from every conceivable source. The nests and rocks are white with excrement, and with this the callow young are more or less besmeared. Then about the nests lie fragments of uneaten fish, and to these flies swarm in myriads. Add to the general raciness of odor an occasional overdone egg, and you have a fine unsavory mess of it.

Young Cormorants are perfectly helpless when hatched and are, if possible, uglier than young Magpies. Not only are they coal black and as naked as sin, but their heads are scarcely larger around than their long necks, and a nestful of them looks more like a bundle of young black-snakes than anything avian. The characteristic orange upon the gular area of the adult is reflected by a pale yellow, sharply contrasting with the posterior black, even in the very youngest specimens; while youngsters half or two-thirds grown are covered with a coarse black down. When disturbed at the nest the younglings quit their quarters and waddle off clumsily to the furthest nest of the immediate group, where they stand on the defensive a dozen or twenty strong. When brought to bay, and, of course, after they have disposed of the contents of their crops, no matter where, they thrust out the neck at the intruder and

open the gullet, until it almost makes one dizzy to look down it, emitting the while a sound between a hiss and a bark, intended no doubt to be frightful, but really



From a Photograph, Copyright, 1908, by W. L. Doxson.

YOUNG WHITE-CRESTED CORMORANTS ON THE GRENVILLE ARCH.

only dismal or ridiculous. Most interesting, also, is the curious pulsating of the loose membranes of the throat during excitement or anger, or perhaps during activity of any kind. The pulsating movement is rapid and to appearance violent, and it is characteristic not only of this species but of the next as well.

Among the young Cormorants noted on the Grenville Arch was one with a misshapen foot, who knowing his weakness did not attempt to escape, but hissed and barked at me most valiantly every time I passed. He fairly clamored for my blood, but when I ventured a hand he picked at it rather sheepishly and then desisted, as tho admitting it was all bluff. What a curious provision of nature it is which fills the mouths of her most inoffensive creatures with loud boastings!

No. 342.

BRANDT'S CORMORANT.

A. O. U. No. 122. *Phalacrocorax penicillatus* (Brandt).

Synonyms.—BROWN CORMORANT. SHAG.

Description.—*Adults in early nuptial plumage:* In general deep lustrous greenish black, changing to lustrous purplish black on head and neck; lighter on scapulars and wing-coverts, where feathers exhibit violet-green iridescence, and have narrow edgings of the darker green; gular sac dull blue, bordered basally with dull orange or fawn-color. From each side of the neck springs a loose irregular tuft of stiffish linear white feathers, declined backward and downward 2 to 3 inches. Similar feathers of twice the width and half the abundance start from the scapulars, and a few others, mere stiffened hairs, are scattered over the lower occipital region. These white adornments disappear with the advance of the nesting season, and the plumage loses much of its luster (?). Irides sea-green; bill dusky. *Young:* Brownish black, lusterless, lightening on belly, and with lighter edgings of feathers on scapulars and wing-coverts.

Recognition Marks.—Eagle size; bluish and fawn-colored gorget most distinctive at close quarters—general absence of positive characteristics itself distinctive at greater range.

Nesting.—*Nest:* a substantial structure of moss, sea-weed, and compacted grasses, deeply cupped, placed on level surface of rock, usually crest of islet. *Eggs:* 4, pale bluish green, overlaid with white calcareous deposit, elliptical ovate or elongate ovate. Av. size, 2.55 x 1.54 (64.8 x 39.1). *Season:* May 20-June 20; one brood.

General Range.—Pacific Coast of North America from Vancouver Island to Cape St. Lucas.

Range in Washington.—Breeding, but not commonly, upon the Olympiades;

non-breeding resident and visitor at all seasons on Puget Sound; more common upon the upper Sound in winter.

Authorities.—? Audubon, *Birds of America*, Vol. IV, pl. 412. Townsend, *Narrative* (1839), 351. Kk. B. E.

Specimens.—(U. of W.) Prov. E.

"THIS species inhabits the Columbia River, and is not uncommon. It is seldom seen near the sea, but is mostly observed high up upon the river. It is, like most species of its genus, partially gregarious, and is fond of resting in company. The old trees which are fastened in the bottom of the river, and protrude above the surface, and the isolated rocks in the stream, are its favorite places of resort. Here it sits, sometimes for hours together, indolently gazing into the water, and only leaving its perch to seize an unsuspecting fish,



*Taken on the
Grenville Arch.*

*Photo by
the Author.*

A POPULAR NESTING SITE.

THE REQUIREMENTS OF ALL THREE SPECIES OF THE CORMORANTS ARE EXACTLY MET BY THIS SITUATION. A NEST OF BAIRD'S CORMORANT APPEARS AT THE LOWER LEFT, A WHITE-CREST'S IN THE CENTER, A BRANDT'S TO RIGHT.



PAAHWOKE-IT — THE HONE OF THE BRANDT CORMORANT.
AS SEEN FROM THE CREST OF CARROLL ISLET.

Photo by the Author.

which may happen to pass near it. It is very shy and cautious, and is seldom killed even by the Indians, who are fond of its flesh" (Townsend)^a.

Townsend was correct in calling attention to the wariness of this bird as well as in describing its custom of posting in a commanding situation. It is a familiar figure on the stringers of salmon-traps, as well as on isolated piles or the old abandoned wharves on the lower Sound. If the bird is not exactly of a mind to fly at the first alarm from the passing steamer, it stands with wings



Taken on the Grenville Arch.

Photo by the Author.

NEST AND EGGS OF THE BRANDT CORMORANT.

half open, that, should necessity arise, no time may be lost in making good its escape. Again a group of them will sit on a low-lying reef, or even on a floating log, with wings half extended, "drying their clothes" in the sunshine. The wings as well as the feet are used under water, but we cannot guess why the Cormorants more than other aquatic species should be averse to wet plumage.

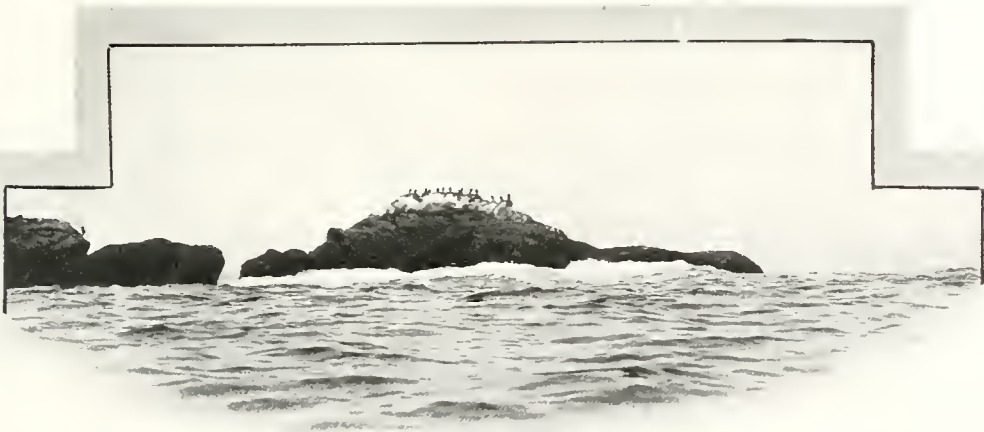
Brandt Cormorants in small numbers frequent the waters of Washington Sound in summer, and they roost on certain picturesque islets and promon-

a. Narrative (1839), p. 351

tories of the San Juans; but these companies appear to consist solely of immature and non-breeding birds. The nesting birds are found in small colonies, each consisting of about thirty pairs, upon the Olympiades, notably upon the Grenville Arch Rock, Jagged Islet, and Paahwoke-it. The birds are late nesters, and their progress is constantly hindered by nest-robbery on the part of the Western Gull and the Northern Raven. So close a watch do their enemies keep, that a Cormorant dares not leave its eggs for an instant unless its mate is by to take its place. This species nests only on top of the islands, and then in the more level places. Characteristically the nest is a huge bowl, or crater, of dried eel-grass and sea-weed, accumulated thru several seasons, cemented firmly by the excrement of succeeding years, and freshly lined in its deep hollow with fine green grass. The eggs are elongated like those of Baird's, but are uniformly, almost diagnostically, larger. Fresh eggs are of a delicate blue, with irregular deposits of rough white calcareous matter upon the surface. Eggs long exposed become a deep green, as tho having absorbed the color of the underlying grass, while the white overlay absorbs filth until it becomes nearly black.

Four eggs appear to constitute the set, as in the case of all our Washington Cormorants. Five are elsewhere reported, but in an experience of several seasons I have never seen more than four in one nest. Wherever the number falls short of this, there is reason to suspect the visit of Crow or Raven.

The Indians used to be very fond of Shags' eggs, which are really very good eating, and they sacked the nesting rocks once or twice each season; but it has been found necessary to put a stop to this practice upon the Olympiades.



No. 343.

VIOLET-GREEN CORMORANT.

A. O. U. No. 123. *Phalacrocorax pelagicus* Pall.**Synonyms.**—PELAGIC CORMORANT. SHAG.

Description.—*Adults in breeding plumage:* General coloration deep lustrous bottle-green with purplish reflections; head and neck all around shining violet with steel-blue changes, a few lanceolate white feathers projecting at random from sides of head and neck; a prominent flank-patch pure white; frontal and occipital feathers lengthened, producing two crests, of which frontal more prominent; frontal feathering reaching culmen, but eyelids and space below eye bare; gular sac reduced in area, dull coral-red. Bill and feet bluish-black; iris bright red. *Adults after breeding season* are without crests, plumules, or flank-patches. *Young birds* are plain sooty black above, lighter, or whitening centrally, below. *Nestlings* hatched naked, soon acquiring sooty gray down. Length 25.00-29.00 (63.5-73.6); wing 10.00-11.00 (25.4-27.9); tail 6.00-7.00 (15.2-17.8); bill 2.00 (5.0.8); tarsus 2.00 (5.0.8).

Recognition Marks.—Brant size; white flank-patches in breeding season (but bird occurs in Washington in winter only?); lustrous green and violet plumage distinctive for all save following form; larger.

Nesting.—*Nest:* chiefly of compacted eel-grass, cemented with excrement, placed on narrow ledge or upon rock boss of sea wall. *Eggs:* 4, pale bluish green with irregular calcareous covering, elongate ovate to cylindrical ovate. Av. size, 2.30 x 1.40 (58.4 x 35.6). *Season:* June; one brood.

General Range.—Coast and islands of the North Pacific; on the Asiatic side south to the Kuriles and Japan; on the American side breeding south to Vancouver Island; south in winter to Puget Sound.

Range in Washington.—Winter visitors on Puget Sound and connected waters.

Authorities.—*Graculus violaceus*, Gray, **Baird**, Rep. Pac. R. R. Surv. IX, 1858, p. 882, part (winter specimen). Rh. Kb. Kk.

Specimens.—(U. of W.) Prov. C.

VIOLET-GREEN describes the characteristic sheen of the plumage in both *pelagicus* and *resplendens*; but by common consent the name as a distinctive mark has been reserved for the larger birds of the North. Our breeding birds are really intergrades in size, but they are decidedly smaller than those which descend upon our coasts in winter; and on the whole it would seem wiser to regard the Forty-ninth Parallel, or even the northern end of Vancouver Island, as the dividing line between the two forms, rather than the mouth of the Columbia River, as has formerly been the custom.

No. 344.

BAIRD'S CORMORANT.

A. O. U. No. 123 b. *Phalacrocorax pelagicus resplendens* (Aud.).

Synonyms.—RESPLENDENT CORMORANT. SOUTHERN VIOLET-GREEN CORMORANT. SHAG.

Description.—In coloration exactly like preceding form; smaller. Wing 10.00 (254) or under; bill narrower, averaging in length 1.75 (44.5).

Recognition Marks.—Brant size; white flank-patches distinctive in breeding season; the smallest and the *blackest*, to distant view, of the local Cormorants. Nests on the *sides* of cliffs.

Nesting.—*Nest and Eggs:* as in preceding. Av. size of eggs, 2.20 x 1.30 (55.9 x 33). *Season:* c. June 20; one brood.

General Range.—Pacific Coast of North America from the Forty-ninth Parallel south to Mazatlan, Mexico.

Range in Washington.—Breeding commonly thruout the Olympiades; also sparingly on the San Juan Islands.

Authorities.—*Phalacrocorax resplendens*, Audubon, Birds of N. A. Vol. V, 1839, p. 148, folio, pl. 412, fig. 1. T. C&S. E.

Specimens.—U. of W. E.



Photo by the Author.

KNOB-AND-SPIKE.

HARD experience, as well as innate suspicion, has led the Baird Cormorant long since to forsake the comfortable quarters of her easy-going kinsmen, the Brandt and the White-crest, and to rear her young upon the bosses and the inaccessible ledges of grim sea-cliffs. The ridges and crests belong to the larger Shags, but the sides are her domain. Her calculations are not always infallible—your Shag is no Plato—but ungetatability has been her life study, and her average attainments in this line are noteworthy. The sculptured pillars and crannied sea-walls of our Pacific Islands, the Olympiades, are an especial delight to her, and here the species may be studied to perfection.

There is scarcely an islet along our entire western coast which does not boast from one to twenty pairs of these venturesome birds, while the major isles and more abrupt promontories may harbor hundreds. The Cormorants range themselves in serried ranks along the impossible ledges of Fuca's Pillar, looking collectively like black bottles on a druggist's shelves, or, more elegantly, and at closer quarters, like ebony statuettes on marble pedestals.

Cormorants plunge into the wildest waters as fearlessly as sea-lions, and they carry on their fishing operations about the shoulders of booming reefs, which humans dare not approach. After luncheons, which occur quite frequently in the Cormorant day, the birds love to gather on some low-lying reef, just above the reach of the waves, and devote the intervening hours to that most solemn function of life, digestion. There is no evidence that the birds discuss oceanic politics on these occasions; the benevolent assimilation of a twelve-inch Cultus Cod is presumed to be ample occupation for union hours.

As might be inferred from their choice of nesting sites, Baird Cormorants are more

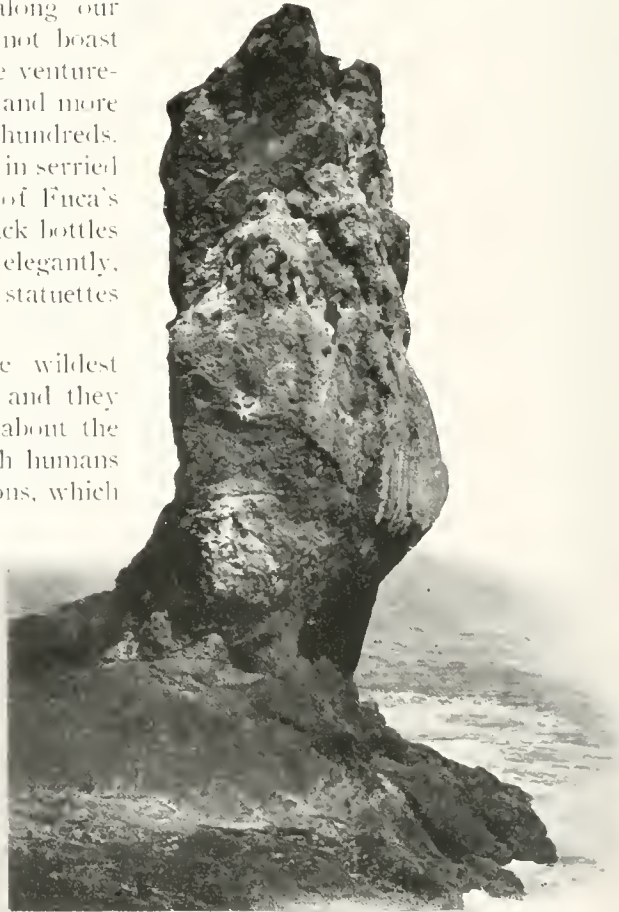


Photo by the Author.

DOHODAAALUH PILLAR.

A NESTING SITE OF THE BAIRD CORMORANTS, SOME OF WHICH
MAY BE DIMLY DISCERNED IN OUTLINE AGAINST
ITS BATTLE-SCARRED SIDES.

sprightly than the larger species, and also exceedingly shy. An interview at close quarters is impossible, and we must employ stealth to get close enough to one to note the lustrous black plumage with the flashing iridescence of violet and green and purple, the curious feather-tufts like budding horns, and the blood-red eyes, which impart to their owners a fierce, not to say wicked, appearance. Under apprehension of danger, the bird will crane its neck at every conceivable angle, punctuating its moments of anxiety with a flirt of its mobile tail—

that is, if that useful member can be spared from its frequent duty of assisting the bird to maintain a precarious foothold on some slight projection of the cliff-side. Now and then also the bird voids vigorously, distributing an impartial whitewash over all surrounding objects.

When the birds of a colony quit their nests, they launch out swiftly, wagging their heads from side to side if the danger is above them. They may join the Puffins and Gulls for a few rounds of inspection, but oftener they settle in the water at some distance from the shore, a large company of them looking and acting very much like a flock of black geese. It requires quite an effort on the bird's part to rise from the water, but this is done with a single motion of the wings, unassisted by the feet, as



Taken on the Grenville Arch Rock. Photo by the Author.

BAIRD CORMORANTS AT NEST.

would be the case with heavy ducks and loons. If the Shag has been diving, it may burst out of the water with the acquired impetus of the chase; and once under way, its flight is swift and vigorous and not altogether ungraceful.

Baird Cormorants are late nesters. Fresh eggs may be taken by the middle of June, but the first of July is nearer the height of the season. Nests are bracket-shaped, or quadrispherical, oftener than completely crater-shaped;

for allowance must be made for the crowding of the wall, against which this Cormorant always builds. The structure is the work of successive seasons, and the limy excrement, which invariably cements the grasses of which it is composed, appears rather to favor its preservation than to hasten its decay. The eggs are of a delicate greenish blue when first laid, half or two-thirds



Taken on Flat-top.

Photo by the Author.

NEST AND EGGS OF BAIRD'S CORMORANT.

recall the probable derivation of the word "Cormorant"; namely, *Corvus marinus*, equals *Sea-Raven*^a.

^a. Also derived by some from Armoric *mar-ran* = Sea Raven + *Cor*, pleonastic addition from the Latin; but this is doubtful and far-fetched.

overspread with a thick chalky deposit. They are of an elongated elliptical shape, varying greatly in size, but averaging smaller than those of either of the other local species, while runts, or undersized eggs, are not infrequent.

The bird utters no note of protest at the intrusion of her domain, save a low croak, of apprehension rather than of warning. This note, by the way, serves to

No. 345.

AMERICAN WHITE PELICAN.

A. O. U. No. 125. *Pelecanus erythrorhynchus* Gmel.**Synonym.**—ROUGH-BILLED PELICAN.

Description.—*Adult in breeding plumage:* General plumage white; the primaries blackish touched with hoary gray near tips; secondaries blackish with white basally; a pendant occipital crest of white or pale yellow; lanceolate feathers of lesser wing-coverts and chest pale yellow or buff; a thin, elevated, horny protuberance on ridge of culmen a little forward of the middle; bill and pouch reddish; legs and feet bright orange-red. *Adult in winter:* Similar but without horny protuberance on bill; the occipital crest wanting; yellow coloring of chest and wing-coverts pale; bill and feet not so bright. *Immature:* Like adult in winter, but feathers of crown and lesser wing-coverts mixed with brownish gray; chest feathers not modified; a fluffy, short, occipital crest; the bill, pouch, legs, and feet pale yellowish. "Length $4\frac{1}{2}$ to nearly 6 feet; extent $8\frac{1}{2}$ to nearly 10 feet; weight about 17 pounds" (Ridgway). Wing 22.00 (558.9); tail 6.00 (152.4); bill 10.50-15.00 (266.7-381); tarsus 4.50 (114.3).

Recognition Marks.—Immense size, with large bill and gular pouch; white plumage.

Nesting.—*Nest:* on the ground, a mound of gravel and rubbish with a slight depression on top, on beach or island of large lake. *Eggs:* 2-4, bluish white or pale buffy, often more or less stained, and with chalky deposit on surface. Av. size, 3.40×2.25 (86.4 $\times$ 57.2). *Season:* June.

General Range.—"Temperate North America, north in the interior to about latitude 61° , south in winter to western Mexico and Guatemala; now rare or accidental in the northeastern states; abundant in the interior and along the Gulf Coast; common on the coast of California" (A. O. U.).

Range in Washington.—Not common, and possibly non-breeding summer resident on the East-side; casual during migrations on Puget Sound.

Authorities.—[Cooper and Suckley, p. 265. Not a valid Washington record.] Rhoads, Proc. Acad. Nat. Sci. Phila. 1893, p. 31. T. D^r. B. E.

Specimens.—(U. of W.) Prov.

IT need not be supposed that these ponderous fowls, the largest of water birds by avoirdupois, are to be set down as awkward simply because they have big bills. Viewed at a distance, as they rest on shore or near some low mud island, their stately ranks present an impressive spectacle. In flight they are calm, almost majestic; and their white plumage, set off by black wing-tips, makes a fine showing in the morning sun. They sit the water almost as gracefully as swans and "tip" in a dignified way, immersing the entire head and neck—again much after the fashion of

swans. Being provided also with an extensive system of air sacs, they ride high and get credit for all their inches.

The Pelican lives upon an exclusive diet of fish, and he uses his great gular pouch as a dip-net, or scoop, rather than as a creel for transportation, as was formerly supposed. He prefers little fish to big ones; and, indeed, the big fish rarely come his way, for he does not plunge from midair, after the fashion of his brown cousin, *P. californicus*. After a successful haul, the fisher bird raises his head, contracts the bellying net, or pouch,



Taken in Oregon.

Photo by Finley and Bohlman.

WHITE PELICAN, IMMATURE

ejects the water, and swallows the catch. It sometimes happens that the bird makes a greater catch than he can handle, or, at least, greater than he has time to swallow during the rush of a successful drive. In this case he retires to shore with a full basket to effect a readjustment or to discard a clearly proven surplus.

The fish are carried in the crop and the young are fed during infancy by regurgitation. As they advance in age, however, they are allowed to thrust their greedy beaks down the parental gullet and help themselves to findings—a most shocking procedure.

The White Pelican is naturally associated with the wilderness, not because the bird has anything against civilization *per se*, but because men cannot abide the presence of anything big, or strange, or showy. "Here

is a big white bird with a funny bill. Get your gun, Jake, and kill it. Brave boy! Why, not even a barn door could have withstood such a murderous assault. You will be the talk of the store next Saturday." Yes; and coming generations will curse you for an indiscriminating ass, when you and your ilk have quenched the last ray of beauty and abolished the last touch of splendor from the landscape.



Photo by the Author.

THE SHIFTING SANDS OF MOSES.

Pelicans still breed in great companies upon the islands and alluvial bars of the larger and less frequented lakes of the West. The lakes of southern Oregon, Klamath, Tulé and the rest, boast several colonies. Concerning their nesting in Washington, nothing has been preserved; but it is fair to suppose that they have bred, at least until recently, on Moses and Colville Lakes. In May, 1906, Mr. Bowles and I saw thirty birds on Moses Lake and they appeared to be quite attached to the locality, altho we saw no sign of their nesting, up to May 19th. Detached pairs from this colony are occasionally seen at Brook Lake and upon the chain of lakes in the Grand Coulee.

No. 346.

CALIFORNIA BROWN PELICAN.

A. O. U. No. 127. *Pelecanus californicus* Ridgw.

Description.—*Adults in breeding plumage:* Bill mottled light and dark with various tinting of carmine; bare space about eye brownish; eyelids red; irides white; pouch red; feathers of head and borders of pouch white; the rest of neck dark chestnut to blackish; upperparts silvery gray, the feathers of back, rump, lesser wing-coverts, etc., edged with dusky; underparts brownish gray, striped with silvery white on sides, etc.; feet black. *Adult in winter:* Similar but without chestnut on neck, white instead, the top of head and fore-neck tinged with straw-yellow. *Young:* Head and neck light brownish gray, somewhat mottled with paler tips to the feathers; back, wing-coverts, etc., dull brown, the feathers tipped with pale fulvous; lower parts white, tinged with brownish gray laterally and posteriorly" (Ridgway). Length of adult: $4\frac{1}{2}$ feet (1371.6) or more; wing 21.00-23.50 (533.4-596.9); bill 12.00-15.00 (304.8-381).

Recognition Marks.—Giant size; silvery gray and brown coloration with immense bill distinctive.

Nesting.—Does not breed in Washington. *Nests:* in colonies on the ground, or in low trees and bushes, of sticks, weeds, and trash. *Eggs:* 3 or 4, chalky white; elliptical ovate. Av. size, 3.10×1.95 (78.7 $\times$ 49.5). *Season:* March; one brood.

General Range.—Pacific Coast of America from Burrard Inlet, south to the Galapagos; breeds upon the Coronado Islands and southward.

Range in Washington.—Not uncommon; sometimes abundant visitors upon the shores and harbors of the West Coast, in fall only.

Authorities.—*Pelecanus fuscus* Linn., **Cooper and Suckley**, Rep. Pac. R. R. Surv. Vol. XII, pt. II, 1860, p. 266. T. L², Rh.

Specimens.—(U. of W.) Prov.

COOPER records about all we know of this Pelican in Washington: "About September 1, the gray or 'brown' pelican enters Shoalwater bay in large flocks which remain until November. They feed principally during rising tide, wandering in long trains over the channels, and diving occasionally one after the other, sometimes scattering and fishing singly. They rest, during the intervals, on a large sand island in the mouth of the bay. I have never seen them in their spring migrations northward."

R. H. Lawrence adds: "Two mounted birds seen at South Bend,—one shot in November on Willapa Harbor where they are pretty common in fall. They are not uncommon here on Gray's Harbor."

It seems probable that the California Pelicans wander north irregularly after the breeding season, which is passed on the Coronado Islands and south-

ward. They are known to the Quillayute Indians, who point out a rock off Cape Johnson upon which the birds sometimes roost to the number of a hundred or more. In British Columbia they are recorded as casual in the interior in company with the White Pelican.

No. 347.

BLACK-FOOTED ALBATROSS.

A. O. U. No. 81. *Diomedea nigripes* Aud.

Synonyms.—GOONEY. GONY. BROWN GOONEY.

Description.—*Adult*: General color sooty brown, lighter (grayer) below, except on throat and chest; space all around bill grayish white, thence shading thru grayish brown on sides of head and upper throat; anterior half of upper and lower eyelids dusky; posterior half white, that of the lower lid produced backward and downward as a decided white patch; lighter, nearly white, about base of tail; feathers of upperparts tipped with lighter gray, as tho faded; primaries black with yellow shafts; tail-feathers blackish with white shafts, except on terminal portions; bill dark reddish brown; feet black. *Young birds*: Like adult, but tail-coverts sooty black. Length 30.00-36.00 (762-914.4); wing 19.00-20.00 (482.6-508); tail 6.50 (165.1); bill 1.50 (38.1) deep, and 1.25 (31.8) wide at base, length 4.00 (101.6); tarsus 3.75 (95.3).

Recognition Marks.—Eagle size; sooty plumage of adults and young; reddish brown bill; white face; black feet.

Nesting.—Does not breed in Washington. *Nests*: in colonies; single egg laid on bare sand or rock.

General Range.—The North Pacific; south on American coast to California.

Range in Washington.—Common off West Coast.

Authorities.—? Audubon, Orn. Biog. V. 1839, 327. [Newberry, Rep. Pac. R. R. Surv. VI. pt. IV. 1857, p. 106, "Mouth of the Columbia."] [Cooper and Suckley, p. 269, under *D. brachyura*. Not a clear record, but probably valid.]

Townsend (C. H.), Proc. U. S. Nat. Mus. XIII. 1890, p. 142. Hubbard, Zoe. III. July 1892, p. 142.

Specimens.—Prov.

THE solace of the ocean voyager—at least after novels and shuffle-board have lost their charm—is the sight of the gooneys. These tireless watchers of the deep adopt our ship almost without our knowing it some thirty miles from shore, where the gulls abandon her to her wilful course across the vast Pacific. For the bare hope of refuse from the cook's galley, they will follow the ship for hours and days together, but they count it no hardship. It is sport rather. Instead of plodding wearily in the wake, they throw great circles of

flight about the beleaguered vessel and seem thus in sheer wantonness to mock the labor of steam. Excelled in powers of flight by none, and rivalled only by the Man o' War Bird (*Fregata aquila*), the Albatross is at once the marvel and the despair of human attainment; attainment not merely by way of imitation—that were impossible—but in the matter of understanding. How *does* he do it? Apparently by a mere effort of will, certainly without visible propulsion, the bird skims low over the water, eluding with consummate skill the unevenly-crested waves, or else shoots aloft without a stroke upon those rigidly

outstretched pinions.

Yet in spite of the fact that all of Ocean's untrammelled wastes are before him, and that abundant viands, fish and squids and sea-faring crustaceans, await his pleasure, this rover is singularly at our mercy. The tragedy of the Ancient Mariner was first of all a trag-



Taken on Laysan Island.

Photo by W. K. Fisher.

THE DUET

edy of bird-life. The confidence of an Albatross was wantonly betrayed and all the misfortune followed—in the story. In point of fact the betrayal, tho not the retribution, has been a thousand times repeated. On certain ships it is considered great sport to shoot "Mollymawks"; and pump guns are far more destructive than crossbows.

But that is not the worst. Having the sea before him, the Albatross could, of course, let us alone if we were unworthy of confidence; but we have discovered his breeding haunts upon certain islands of the mid-Pacific. Here is what happened in one instance in the case of a related species, the Laysan Albatross, *Diomedea immutabilis*. It was on Marcus Island (Lat. 24° 14' N., Long. 154° E.), for a time under control of the Japanese, but later relin-

quished to the United States. "Disappointed in not being able to find guano by their crude methods, the Japanese developed a scheme to make a marketable commodity of the Goonies, by killing them and boiling them down in a great kettle to form a *fertilizer*, which they shipped to Japan, saving, however, the long wing quills to sell as eagle-feathers for the decoration of women's hats; and the breast feathers were plucked off and sold by the pound. Under this treatment the colony has greatly dwindled, and in 1902 the birds were only killed for their feathers."^a



Photo by W. K. Fisher.

ALBATROSSES ON LAYSAN.

In May, 1902, Mr. Walker K. Fisher with the U. S. Fish Commission steamer *Albatross*, found the Black-footed and Laysan Albatrosses breeding upon the island of Laysan in immense numbers, variously estimated at from one to two million adults. His account of their nesting habits, together with their grotesque dances, or cake walks, reads like a passage from the *Arabian Nights*.^b According to this authority the Albatrosses consume about ten months of the year in nesting. The single egg is laid near the middle of

a. *The Auk*, Vol. XXII., Jan., 1905, p. 99; Review of Bryan's "A Monograph of Marcus Island."

b. W. K. Fisher, *Habits of the Laysan Albatross*, *Auk*, Jan., 1904, p. 1 ff.

November and is not hatched till February. The young require to be fed for six months before venturing abroad, so that it is not until the 1st of September that the hard-working parents may take a two months' vacation.^a

It is, therefore, on account of the exactions of family cares upon the adults that immature birds, or "brown goonies," are much more frequently seen upon the high seas.

No. 348.

SHORT-TAILED ALBATROSS.

A. O. U. No. 82. *Diomedea albatrus* Pall.

Description.—*Adult*: Body plumage white; head and neck white, more or less washed, especially behind, with tawny yellow; wings and tail sooty gray or dusky, with admixture of white in varying proportions; exposed portions of flight feathers and rectrices chiefly dusky; no re-entrance of feathers on sides of mandible; outline of feathering at base of bill nearly even on culmen and sides; bill pale reddish yellow; feet livid flesh-color, or pale bluish, drying darker. *Young*: Entire plumage sooty brown, lighter (inclining to sooty gray) on chin and belly. Length of adult about 3 feet (91.44); wing 20.00 (508); tail 5.75 (146.1) bill 5.00-6.00 (127-152.4) in length, 2.00 (50.8) in depth at base; outline of culmen concave.

Recognition Marks.—Eagle size; white plumage, large beak of adult; nearly uniform sooty plumage of young bird *without* white "face" (but chin whitish).

Nesting.—Does not nest in Washington. Breeds in colonies, laying its single equal-ended white egg upon the bare ground. Av. size of egg, 4.25 x 2.60 (108 x 66.1). *Season*: Nov.-Dec.?

General Range.—The North Pacific Ocean; of regular occurrence, save in breeding season, off the coasts of western North America to California, and eastern Asia to Japan.

Range in Washington.—As above; also casual on the Straits of Juan de Fuca.

Authorities.—*D. brachyura*, Temm., **Baird**, Rep. Pac. R. R. Surv. IX. 1858, p. 822. C&S. E.

Specimens.—(U. of W.) Prov. BN.

THIS species is rather more common off our shores than the last-named, being usually the first of the Goonies to join out-bound vessels at the entrance

a. "By Executive Order No. 1010, dated February 3, 1909, the 'Hawaiian Islands Reservation' was established. This national bird preserve includes Laysan, Necker, and adjacent small islands, upon which great numbers of pelagic birds nest, such as Albatrosses, Shearwaters, and Terns. Persistent rumors have circulated in the newspapers of late, to the effect that Japanese were planning to land on the rookeries to destroy every bird obtainable, the feathers to be saved for various commercial purposes and the bodies to be made into fertilizer. The fact that not a few species, which are confined in the breeding season to these small islands would thus be exterminated, makes the establishment of this preserve with little doubt the most important step, from a strictly ornithological standpoint, in the history of bird preservation in this country. The annihilation of *species* was threatened" (*The Condor*, March, 1909).

of the Straits. According to Fannin, the Short-tailed Albatross is "tolerably common on both coasts of Vancouver Island, but more abundant on the West Coast"; and he adds, "A few have been taken in the straits off Victoria Harbor."

Because of its pelagic habits and its remote breeding haunts little has been made available with reference to this species, so we may be permitted to present for comparison these words upon a better known species, the Wandering Albatross (*D. exulans*): "With outstretched motionless wings he sails over the surface of the sea, now rising high in the air, now with a bold sweep and wings inclined at an angle with the horizon, descending until the tip of the lower one almost touches the crests of the waves as he skims over them. Suddenly he sees something floating on the water and prepares to alight; but how changed he is now from the noble bird but a moment before all grace and symmetry. He raises his wings, his head goes back, and his back goes in; down drop two enormous webbed feet straddled out to their full extent, and with a hoarse croak, between the cry of a Raven and that of a sheep, he falls 'souse' into the water. Here he is at home again, breasting the waves like a cork. Presently he stretches out his neck, and with great exertion of his wings runs along the water for seventy or eighty yards until at last, having got sufficient impetus, he tucks up his legs and is once more fairly launched into the air."^a

This inability to rise from a level surface, which is common to all the Albatrosses, is often taken advantage of by sailors who catch the birds by means of triangular pieces of tin baited with pork. Unable to disengage the tin from the angles of the beak, the struggling gooney is landed on board ship; and once there, escape is impossible without a greater running start than the ordinary deck affords.

No. 349.

PACIFIC FULMAR.

A. O. U. No. 86 b. *Fulmarus glacialis glupischa* Stejn.

Synonyms.—GLUPISCH (Russian name). MOLLY MAWK.

Description.—*Adult, light phase:* Head and neck all around and underparts white; remaining upperparts ashy gray, darkening on quills. *Adult, dark phase, and Immature:* Entire plumage sooty plumbeous. Bill yellow, tinged with greenish; feet yellowish gray. *Downy young:* White. Length: 17.00-19.00 (431.8-482.6); wing about 12.00 (304.8); bill 1.55 (39.4), depth at base .70 (17.8).

Recognition Marks.—Crow size but more naturally comparable to gull; ashy

a. Hutton: *Ibis*, 1865, p. 281.

blue and white, or bluish sooty plumage; pelagic habits; stouter bill and more robust proportions (especially of head) as compared with Shearwaters.

Nesting.—Does not breed in Washington. *Egg*: single, white, rough, nearly equal-ended, laid on ledge or in cranny of cliff, under rock, etc. Av. size, 2.90 x 2.00 (73.7 x 50.8).

General Range.—The North Pacific, breeding on the islands bounding Bering Sea; south in winter on the American side to Mexico.

Range in Washington.—Probably of regular occurrence off western coast.

Authorities.—["Pacific fulmar," Johnson, Rep. Gov. W. T. 1884 (1885), 23.] **Chapman**, Bull. Am. Mus. Nat. Hist., Vol. III., No. 1. (1890), p. 130.

Specimens.—Prov.

ALTHO we have but one authentic record of the capture of this species in Washington we have every reason to believe that it is of regular and abundant occurrence off our west shore. Fulmars are hatched by countless thousands in the rookeries of Bering Sea; and they spread southward over the north Pacific, being limited, rather than directed, by the land barriers on either side. The meagerness of our information therefore cannot argue the scarcity of this species but is simply on a par with that general ignorance which has until recently prevailed on all sides with regard to our "neglected coast."

Of the bird's occurrence on the Commander Islands, Stejneger writes^a: "The 'Glupisch' is one of the commonest summer visitors to the islands, and breeds in enormous numbers in suitable places, that is to say, in high and steep rocky bluffs and promontories boldly rising out of the sea 300 to 800 feet high, and I have spent hours under their rookeries listening to their whinnying voice and watching their high and elegant flight in sailing out and in and around the cracked rocks like bees at an immense bee hive."

And Mr. Anthony, studying the Fulmars ten miles out from Point Loma, Cal., says^b: "They are hardly what one would call gregarious, altho several are often seen in company flying along in a loose straggling flock. More often they are seen in flocks of *Puffinus gavia* [now *opisthomelas*], one or two in a flock of fifty Shearwaters. Unlike the Shearwaters, however, they seldom pass a craft without turning aside to at least make a circuit about it before flying on. If the vessel is a fishing sloop sounding on the banks the chances are in favor of the Shearwaters being forgotten and allowed to disappear in the distance, while the Fulmar settles lightly down on the water within a few yards of the fisherman. The next Fulmar that passes will, after having made the regulation circuit, join the first, until within a few minutes a flock of six or eight of these most graceful and handsome Petrels have collected, dancing about on the waves as light and buoyant as corks. * * *

a. Bull. U. S. Natl. Mus. No. 29, p. 95.

b. "The Auk," Vol. XII., Apr., 1895, p. 101 f.

"By lying flat upon the rail of the schooner I could just reach the water with my finger tips when the waves favored me, but even at this disadvantage it was only a few moments till I had captured several Fulmars by coaxing them up with bits of fish and grabbing them when the roll of the vessel placed me near enough. When thrown upon deck they made no attempt to fly, but with outstretched wings hurried to the rail, over which they could just reach, and emptied the contents of their stomachs into the sea, a performance they attempted to repeat whenever they were disturbed. Their actions were so like those of sea-sick landsmen that it was extremely laughable. The popular belief among sailors is that they are really sea-sick, but of course the action is prompted by anything but nausea. It is more likely that the stomach contents are given up as the Tern disgorges when pursued by a Jaeger, as a ransom.

"In catching Fulmars with my bare hand I found it was quite safe to let go of them as soon as convenient, for they are provided with an unusually sharp bill, and are singularly willing to use it."

No. 350.

BLACK-VENTED SHEARWATER.

A. O. U. No. 93. *Puffinus opisthomelas* Coues.

Description.—*Adult*: Upper plumage dark sooty brown to blackish, lighter anteriorly, darker behind, shading on sides of head, neck, and on sides to white of remaining underparts; *under tail-coverts and crissum*, just short of vent, sooty brown; bill slender, (in the skin) blackish above, lighter below; tarsus behind and outer toe blackish; tarsus in front and inner toes with webs (drying) yellowish. Length: 12.00-14.00 (304.8-355.6); wing 9.00 (228.6); tail 3.75 (95.3); bill 1.40 (35.6), depth at base .40 (10.2), at terminal convexity .30 (7.6).

Recognition Marks.—Little Hawk size, but of course appearing much larger—nearer Gull size to eye; long pointed wings; alternate flapping and sailing flight.

Nesting.—Not known to breed in Washington. Single white *egg* laid at end of burrow in earth-bank, five or six feet in. Av. size of egg 2.00 x 1.30 (50.8 x 33). *Season*: c. April 10; one brood.

General Range.—Pacific Ocean, breeding on islands off Lower California; north in summer along coasts to (at least) Vancouver Island.

Range in Washington.—Not common in late summer off western coast.

Authorities.—Dawson, Auk, XXV. Oct. 1908, p. 485 (A. W. Anthony in *epist.*).

Specimens.—Prov.

THE "pathless wastes" of ocean not only have no terrors for these hardy navigators, but they appear to be endowed with a subtle sense whereby they are

able to discern the paths ordained by their fellows. Mr. Anthony says^a: "None of our Pacific Coast seabirds adhere so closely to established fly lines as do the three species of *Puffinus*; even when flying fifty or more miles from land the flock that passes will, with almost absolute certainty, mark the line which the next will follow, even tho they be an hour behind. * * * A flock will, on encountering a skiff directly in their path, either divide and pass on either side or all swerve slightly to one side, immediately resuming their line of travel in either case."

Another peculiarity, observed by Mr. Anthony and Mr. Chase Littlejohn, is their habit of circling, whether singly or in flock. The circles are often so large that one does not suspect that the passing birds are moving in other than a straight line, but if one continues out to sea he will presently encounter a stream of birds moving in the opposite direction, the further limit of the mystic circle.

The Black-vented Shearwater nests early in spring upon Guadalupe Island, off the coast of Lower California; and also upon the islands of the Santa Barbara group. Its notes at this season are described as being "a series of gasping, wheezy cries, resembling somewhat the escape of steam thru a partly clogged pipe, uttered in a slightly varied key and repeated from four or five to ten times."

Being thus confined at the breeding season to the coast of the Californias, the Shearwaters are at other seasons widely distributed, at least to northward, and doubtless visit our shores in considerable numbers.

Rev. H. C. Mason, of Seattle, has detailed to me the appearance of vast numbers of sea-fowl, called locally "whale-birds," "tens of thousands of them," moving south close in-shore near Leadbetter Point, in August, 1905; and I am inclined to think that they were of this or the succeeding species.

No. 351.

DARK-BODIED SHEARWATER.

A. O. U. No. 95. *Puffinus griseus* (Gmel.).

Description.—*Adults*: General plumage sooty black, lightening (sooty gray) below, lightest, sometimes nearly white, on chin; lining of wings white with some dusky marbling; bill comparatively large and stout, black; tarsus black outside, and outer toe black on the outer side; tarsus inside, the inner toe, and the outer toe above on the inside, yellow; the webbing black. Length about 16.00 (40.6); wing 11.00-12.00 (27.4-30.4.8); tail 4.25 (10.8); bill 1.55-1.70 (39.4-43.2), depth at base .45-.55 (11.4-14); tarsus 2.00 (50.8).

^a Auk, Vol. XIII., July, 1896, pp. 226, 227.

Recognition Marks.—Really Teal length but appearing Gull size by reason of stout body and long wings; dusky plumage; rapid flight with alternate flap and sail; follows surface of water closely; larger than either *opisthomelas* or *tenuirostris*; axillars chiefly white.

Nesting.—Not known to breed in Washington. Single white egg laid at end of burrow in earth-bank, several feet in. Av. size, 2.40×1.65 (61×41.9). *Season:* (southern hemisphere) c. Feb. 15; (northern hemisphere)? April.

General Range.—The Pacific Ocean, supposed to breed exclusively in southern hemisphere and to summer in the North Pacific, but probably breeds also on islands off northwest coast of America.

Range in Washington.—Common at least in summer and early fall off West Coast and on the Straits of Juan de Fuca.

Authorities.—Kobbe, Auk, XVII. 1900, p. 349.

Specimens.—(U. of W.) Prov. C. D.

WE are all familiar with the migration of birds breeding in the northern hemisphere; but little is known concerning the counter movements of birds whose nestlings are reared under the Southern Cross. Instances of this latter sort are probably not common, but here is unquestionably a case in point. The Dark-bodied Shearwater appears off our coasts from May to September, the southern winter; while its breeding range, so far as known, is confined to Cornwallis and Chatham Islands, off the east coast of New Zealand, together with other points still further south.

Altho Shearwaters range over the entire ocean, their favorite beats lie along the offshore banks, where herring, squids, and surface crustaceans abound. They usually move close to the water with a stiff, double, or treble, flap and a sail, a motion which is admirably suited to the sinuosities of the sea; and altho one may think them a little awkward and slow-gaited, it is astonishing how soon they pass from sight.

In feeding upon floating fish or refuse, Shearwaters alight upon the water with uplifted or slowly folding wings, after the fashion of gulls; but, more commonly, they plunge beneath the surface and use their wings, if need be, in pursuing elusive fish or squids under water.

Scattered individuals of this species may not infrequently be seen in summer about the waters of the Straits, and along shore for a certain distance south of Cape Flattery. In July, 1906, I picked up a dead Shearwater, much decomposed, on the beach at La Push, and from that point on remarked several isolated birds, sighting the last one on the 26th of that month just north of Port Townsend.

On the 24th of June, 1907, as we paddled by compass, in intermittent fog, north of Ozette, we encountered several parties of these Shearwaters within a mile of shore. The birds were seated in the water and required the assistance of their feet in launching to wing, altho they did this with great celerity. We secured two specimens.

No. 352.

SLENDER-BILLED SHEARWATER.

A. O. U. No. 96. *Puffinus tenuirostris* (Temm.).

Description.—*Adult* (*Dark phase?*): General plumage sooty black, lightening, sooty gray, below; chin whitish and a little white touch on lower eyelid; bill slender and weak. [Believed also to have a light phase.] Length about 14.00 (355.6); wing 10.00 (254); tail 3.50 (88.9); bill 1.20 (30.5), depth at base .30 (7.6); tarsus 1.90 (48.3).

Recognition Marks.—Little Hawk size; to appearance a small Gull; generic marks as in preceding, smaller; weak bill.

Nesting.—*Nest* and *Eggs* unknown,—doubtless much as in other species.

General Range.—The Pacific Ocean, chiefly coastwise, north in summer to Kotzebue Sound; breeds in southern hemisphere and also very possibly on the Aleutians.

Range in Washington.—Summer and early fall visitor—sometimes abundant off West Coast—also of probable occurrence on the Straits.

Authorities.—Bowles and Dawson, *Auk*, Vol. XXV, Oct. 1908, p. 485.

Specimens.—Prov. B.

SOME time in May, and again during the fall migrations, there appears off the Washington Coast a rather small black Shearwater, easily distinguished from its larger and somewhat less sooty relative, the Dark-bodied Shearwater. This species, the Slender-billed Shearwater, presents a subject of more than passing interest to the student of pelagic ornithology. Its range extends from north of Bering Strait to the waters of New Zealand. It is found along the Aleutian Islands in flocks numbering thousands, during the spring and summer months, and along down the coast of North America, at least as far as Mexico, as late as December. Up to this time no nesting colonies have been discovered, except in the New Zealand waters; and some writers, reasoning upon this basis, have claimed that this species, as well as others of the genus *Puffinus*, retires to the Southern Hemisphere to nest,—a somewhat unsafe assertion in view of the hundreds of islands in the Aleutian chain yet imperfectly or not at all explored, any one of which might easily afford nesting grounds for the entire northern contingent.

I have seen this species in November and December in the Straits of Juan de Fuca in flocks of thousands; but their occurrence so far inshore is uncertain, being dependent to a great extent upon the presence of the herring on which it feeds extensively. The fish are captured by diving, and the bird in pursuit literally flies under water with half extended wings. So gorged do the Shearwaters become, when a large run of herring is found, that they can

scarcely fly; and in the flock there are generally a few which have become so overloaded that it is only when they have been almost run down by the vessel, that they at last disgorge their surplus and succeed in leaving the water

A. W. ANTHONY.

On the 25th of August, 1907, Mr. Bowles witnessed a flight of these Shearwaters at Moclips in Gray's Harbor County. The weather had been foggy for some days, but the fog lifted on this occasion about an hour before sundown, and discovered a stream of birds passing northward about a quarter of a mile offshore. The living ribbon had a width of ten or a dozen birds and moved continuously at the rate of twenty or thirty miles an hour until no longer visible from shore by reason of darkness. From a quarter to half a million Shearwaters might have passed in the time noted; and of course it was impossible to tell how long the movement had been in progress.

That the prevailing species at this time was *tenuirostris*, was evidenced by a considerable number of dead and dying birds washed ashore on this and preceding days. These Shearwaters, it seems, in company with other sea-birds of several species, were suffering from the attacks of enteric parasites, tape worms. The specimens examined were very much emaciated, and their intestines were found to be packed solid from end to end with these disgusting creatures, rendering death by starvation inevitable.

No. 353.

FORK-TAILED PETREL.

A. O. U. No. 105. **Oceanodroma furcata** (Gmel.).

Synonym.—GRAY FORK-TAILED PETREL.

Description.—*Adult*: Bluish ash, lightening below and on greater wing-coverts, palest, to whitish, on throat and under tail-coverts; tertials tipped with white; lesser wing-coverts, edge of wing, and exposed primaries dusky; a dusky patch about eye; inner webs of primaries lighter ash to whitish, and outer web of outer tail-feather definitely white; bill and feet black. Length 8.00-9.00 (203.2-228.6); wing 6.00-6.50 (152.4-165.1); tail 4.00 (101.6), forked about 1.00 (25.4); bill .60 (15.2); tarsus .85 (21.6).

Recognition Marks.—Chewink size, but appearing more like Nighthawk; ashy blue coloration distinctive.

Nesting.—Not known to breed in Washington, but possibly does so. *Egg*: subelliptical, pure white or with ring of purplish black dots about larger end, placed at end of small burrow in earth-bank. Av. size, 1.25 x .95 (31.8 x 24.1). *Season*: June; one chick.

General Range.—North Pacific Ocean, breeding on certain islands off the

coast of Oregon and Vancouver Island, northward on the American side to the Aleutians.

Range in Washington.—"Seen near Cape Flattery." Breeding range includes the Olympiades, but no colonies have yet been discovered.

Authorities.—["Fork-tailed petrel," Johnson, Rep. Gov. W. T. 1884 (1885), p. 23.] **Dawson**, Auk, Vol. XXV, Oct. 1908, p. 485. (A. W. Anthony in *epist.*)

Specimens.—(U. of W.) Prov. C.

IT is matter of no little surprise that we have not yet discovered Fork-tailed Petrels among the local breeding birds of the Olympiades. Mr. Finley assures me that they abound upon the Three Arch Rocks of Oregon and their breeding range extends north to the Arctic Circle. Mr. A. W. Anthony has seen them in winter off our coast, and there is every reason to suppose that local breeding grounds will yet come to light.

In habits these Petrels do not differ materially from the well-known Kaedings. Indeed, Mailliard found these two species nesting side by side on St. Lizaria, near Sitka, and the only difference discovered was that the eggs of *furcata* were a trifle larger and much more advanced in incubation.

No. 354.

KAEDING'S PETREL.

A. O. U. No. 105.2. **Oceanodroma kaedingi** Anthony.

Description.—*Adult*: General plumage sooty brown, clearest on belly, darkening on head, back, and breast, blackening on lesser wing-coverts, flight-feathers, and tail, lightening to grayish brown on middle and greater coverts, especially upon the edges of the latter; the longer upper tail-coverts chiefly white, with sooty shaft-lines, the longest ones also narrowly tipped with blackish, the lateral lower coverts more or less extensively white in continuation of that of the upper coverts. Bill and feet black. *Downy young*: Entirely sooty black. Length of adult about 8.00 (203.2); wing 5.70 (144.8); tail 3.00-3.50 (76.2-88.9), forked .60-.80 (15.2-20.3); bill (chord of culmen) .60 (15.2); tarsus .88 (22.4).

Recognition Marks.—Chewink size but appearing larger by reason of long wings; dark brown plumage with white rump; fluttering erratic flight.

Nesting.—*Nest*: a few grasses or none, at end of burrow 2 to 3 feet in length, in soil of sea-girt rock. *Egg*: single, nearly equal-ended, white, nearly immaculate, or with ring of reddish brown dots about larger end. *Season*: June-July; one brood.

General Range.—The North Pacific Ocean; breeds on islands from the western coast of Mexico north to Sitka.

Range in Washington.—Breeding on the Olympiades; Erin, Alexander Islet, Dluoyatzachtahl, Carroll Islet, Wishaloolth and Tatoosh—probably also others of the group.

Authorities.—Bailey (Mrs. F. M.), Handbook Birds W. U. S. (1902), p. 37.

Specimens.—(U. of W.) Prov. D.

SO far as we know, this diminutive sea-farer is the only one of the Tubinares, the ocean wanderers, to make its home with us; and even so, it is only by stealth and upon some desolate wave-worn rock that our hospitality is accepted.

During the course of a reconnaissance of our coastal islands, the Olympiades, undertaken in July, 1906, I encountered four nesting colonies of these innocuous foam-flutterers; but because their burrows are so inconspicuous and their habits so secretive, it may easily chance that as many more were overlooked.

The most populous colony was found upon Dhuoyuatzachtahl, an islet of the group known as the Quillayute Needles. The name is a Quillayutan compound meaning Rock-where - we catch-Petrels, and has been from time immemorial a breeding place of these tiny Tube-noses.



On July 20th, 1906,
Taken on Erin.

Photo by the Author.

AT THE END OF THE PETREL'S BURROW.

three of us in company with two expert Indian surfmen, set off in a canoe from La Push to visit this rock a mile offshore. The sea was fairly quiet and the sky perfect, but the swells crashed and roared about the base of the rocks, and landing with cameras was a difficult operation. Once ashore, we were obliged to scuttle between waves to a point where alone it was possible to scale the rock.

The islet is about a hundred feet high, precipitous upon three sides, but

sloping and climbable upon the south. The top has an area of something over an acre, and is unique for the abundance and uniformity of a rank grass which occupies the greater portion centrally. The grass has a stoutly-projecting midrib so that it stands up at a height of two and a half feet, its roots being imbedded in a covering of its own waste to a depth of six or eight inches more. Circling all about this central bed is a border of close-set wiry turf, while a narrow stretch of the dwarf salmon-berry bushes, peculiar to this coast, occupies the extreme crest of the slope upon the north.

Immediately upon arrival our attention was called to tiny openings in the grass, the orifices of subterranean burrows. Sometimes the entrance was clear-cut and open, with a little runway beneath paved (more by accident and use perhaps than by design) with little pebbles; but as often the mouth of the burrow was hidden by a tangle of interlacing grass-stems. The tunnels are about two and a half inches wide at the mouth, and run in from two to three feet. They seldom run straight but twist about at random, widening as they proceed, until a considerable nesting chamber is reached.

Here, according to the season, may be found two adult birds, a bird and an egg, or a bird and young. In the first case it is the male bird keeping company with his mate for several weeks before the single egg is laid. During this honeymoon it is possible that the birds dine out together; but when the egg is laid, the male spends the day at sea, visiting his brooding mate only at late nightfall. Likewise, after the chick is hatched, it is the male who provides the food for mother and babe until such time as the rising appetite of the junior troglodyte requires the services of both parents.

At the time of our visit most of the nests contained young chicks accompanied by their mothers, but some held eggs on the point of hatching.

When removed from the nest, the parent bird appears dazed and blinded, and seldom seeks to escape by flight. Taken into the hand, it jams its head into the recesses of the fingers, thinking only of cover. Placed upon the ground, it pokes about the grass in a fidgety, near-sighted way looking for a hole, and does not scruple to enter the hole of a neighbor rather than remain under surveillance. Once one flew from the hand and made off to sea with a bewildered, hesitant motion, a jerkiness somewhat similar to that of a Nighthawk at close quarters. Others I threw into the air, and they too made off to sea sheepishly, like waifs caught sleeping on a park bench and told to move on.

In no instance did the mother betray any interest in her young, or realize that it, too, was in the same plight. Now and then birds bit us, but their bills were not strong enough to inflict injury. When molested, Petrels eject an ill-smelling oil, which either proceeds from or involves the nostrils in its discharge. This in turn is followed speedily by the contents of the crop, if such

are available; but whether this offering is intended for a ransom or only the result of fright, one cannot certainly tell.

We had been working in the turf plot looking only for fresh eggs and taking pains to replace the chicks—tiny balls of slate-colored down with feet of a deathly pallor and bills jet black, stupid also as balls of mud—wherever found. But after having waded thru the heavily grassed portion of the island once or twice, the thought occurred to us that there might be Petrels there. Judge of our surprise, however, when we found the vegetable mold a perfect labyrinth of Petrel burrows! So light was the accumulation in point of density (once the growing blades were penetrated) and so abundant the birds that one had only to dig with the hands, dog-fashion, and birds, eggs, and young were the invariable result. The whole half-acre of grass proper was a *scething mass of Petrels*. Yet from all that host not a sound to betray their presence! The sun shone calmly and the breeze blew benignly. Nothing disturbed the serenity of the day save the restless quaverings of the always hostile gulls. There was nothing, in short, to indicate that beneath our feet lay a buried city, not once populous and now deserted, but *now* teeming with life, a city of storm-waifs, gathered from an expanse of a thousand watery leagues, a city perhaps more populous than any other colony of the class Aves within the limits of Washington, lying silent where the eye saw only waving grass. The promise of the situation so wrought upon us that we determined to return at evening some time later, and did so on Monday evening following, July 23rd.

We arrived a little after nine o'clock, provided with matches, bedding, and water, and prepared to spend the night. We found the island still silent, but we used the remaining moments of twilight to further determine the limits of the colony; and found that the dense salmon-berry thicket was likewise occupied by Petrel burrows.

At about ten o'clock the first note was sounded—from the ground. In quality like that of a tiny cockerell, in accent like that of a glib paroquet, came the cry, *Petteretterterrell, etteretterterrell*. The second phrase is slightly fainter than the first, and is, therefore, just suggestively an echo of it. After ten minutes, or such a matter, one sounded in the air. By and by came another and another. And so the matter grew until by eleven p. m. the air was a-flutter with sable wings, and the island a-hum with t's and r's and l's. This hour was typical of the entire night, altho the pace was perhaps a little more furious at one o'clock, when we roused for another observation. We had spread our blankets in the center of the grass field, regretful of the fact that the portion of the population *under* us must needs go supperless for that night. Perhaps, therefore, it was our presence which stirred the birds to unusual demonstrativeness, but I am not at all certain that this was the case, or that our presence affected the situation in the slightest degree.

The air was full at all times of circling birds, at least several hundred of them, probably several thousand. They flew about excitedly, much more nimbly than in the day-time, but still erratically, incessantly clashing wings with their fellows and now and then colliding with such force that they fell down into the grass. Those which flew about uttered from time to time the characteristic cry, but those a-wing were but a small portion of the total number in evidence. The grass swarmed with birds working their way down thru to the burrows, or else struggling out, all giving from time to time the rolling cackle which is the accompaniment of activity; while from the ground itself came an attendant chorus of cries. Taken altogether, there were thousands, perhaps tens of thousands of birds in motion, and the total effect of the rustling and the cackling (or crowing) was a dainty uproar of notable proportions, a never-to-be-forgotten babel of strange sounds. And in this fairy tumult not the least element was the peeping and whining of the chicks, both tended and untended.

The characteristic cry is that given above, but it was frequently abbreviated to *Petteretterell*, *etteretterell*. This was the only adult sound heard save a rolling cry rendered staccato in r's and l's, which came apparently from birds standing at the mouth of the burrows. The note with its short e's is instantly suggestive of the name, and if the notes of other Petrels resemble this one, I should unhesitatingly say that the name is imitative, and that the classic explanation of "Little Peter walking upon the waves" is, like so many other philological traditions, more ingenious than probable.

Concerning the number of birds in this colony it was difficult to form a judgment. We explored fifty nests, representing a hundred birds, in the least populous portion of the colony; yet the area affected was no sensible portion of the whole, certainly not a hundredth, probably not a five-hundredth part. Based upon this estimate alone, the number of resident birds would run from ten to fifty thousand, and it might easily be much greater. I think the birds in the air simply represented the newcomers, who took a few turns about the island as they came in from the ocean, preparatory to settling down to the business of feeding their mates. Certainly the majority of the birds were at all times below the ground; while the number in transition may be judged by the fact that at one o'clock, when I left the bed and groped about in the darkness on hands and knees, I picked up birds both from the ground and the grass.

At four o'clock the volume of sound had subsided, and not above a dozen flitting forms were seen; while at six o'clock there was no slightest sign to betray the presence of the sleeping multitude.

No. 355.

WESTERN GREBE.

A. O. U. No. 1. *Aechmophorus occidentalis* (Lawr.).

Description.—*Adult*: Top of head and broad line down back of neck sooty black; remaining upperparts lighter brownish black, the feathers of the back varied by grayish edgings; primaries dark brown, whitening and with white shafts basally; secondaries chiefly white, but variable number of them darker on outer webs; entire underparts, including lining of wings and sides of head and neck, broadly, pure white with silky sheen, sometimes tinged with brownish gray on sides; bill slender, sharply pointed, very slightly recurved, culmen black or blackish, mandible yellow or olivaceous; iris carmine; feet blackish and olivaceous. *Downy young*: Brownish gray above; white below. Females of this species have been described as *A. clarki*, on the ground of smaller dimensions, especially shorter neck, and minor differences of coloration. The case is a very puzzling one. We meet now and then during the migrations short-necked individuals that would appear to belong to another race, but the center of distribution of such a race is not known; perfect gradations are found to exist, and the alleged differences between male and female (whether of *occidentalis* or "*clarki*") do not appear to hold good. Perhaps the best we can say is that the Western Grebe is subject to considerable variation both as to dimensions and as to color of bill, lores, etc., and that females *average* smaller. Length of adult male: 24.00-29.00 (609.6-736.6); wing 8.00 (203.2); bill about 3.00 (76.2); tarsus 3.00 (76.2). Female ("*clarki*"): "22.00 (558.8); wing 7.00 (177.8); bill 2.30 (58.4); tarsus 2.75 (69.9)."

Recognition Marks.—Brant size; long slender neck; long sharp bill; abrupt demarcation of black and white on sides of head and neck; no rufous on neck; aquatic habits.

Nesting.—Nests in colonies. *Nest*: a floating raft or solid pyramid of rushes and coarse water-plants, 2 to 3 feet in diameter, at edge of swamp or lake. *Eggs*: 4 or 5, elliptical ovate, chalky bluish white when fresh, but rapidly becoming nest-stained, buffy or sickly green to dingy brown. Av. size, 2.40 x 1.55 (61 x 39.4). *Season*: first week in June; one brood.

General Range.—Western United States and southern British Provinces, east to Manitoba; south to Mexico and Lower California.

Range in Washington.—Abundant winter resident and migrant; breeds sparingly east of the Mountains.

Authorities.—[Lewis and Clark, Hist. Ex. (1814) Ed. Biddle: Coues, Vol. II, p. 190.] *Podiceps occidentalis*, Lawr., Lawrence, Rep. Pac. R. R. Surv. IX, 1858, p. 894. C&S. L. Rh. D. Kb. Kk. B. E.

Specimens.—(U. of W.) Pt. Prov. BN.

PROBABLY in no section of the country may the habits of this interesting species be studied winter and summer to better advantage than in Washington. The lakes of southern Oregon afford them more extensive breeding

grounds than may be found in Eastern Washington; but Puget Sound in winter furnishes these handsome Grebes an asylum second to none. The birds begin to arrive at Semiahmoo Bay in somewhat desultory fashion late in September, but their numbers are rapidly augmented so that by the middle of October companies of several thousand may be encountered. There is considerable freedom of movement among them, so that tomorrow's flood may succeed today's scarcity for the eager student; but a large proportion of the birds seen spend the winter with us somewhere.



Taken in Oregon.

Photo by Bohlman and Finley.

WESTERN GREBE.

away; and now and then a bird will seek relief by reaching upward and outward with one of its green paddles and wagging it vigorously, apparently with no intended slight.

Fish form the principal diet of these grebes, and in the pursuit of them the birds exhibit great dexterity. Schools of herring and the like are followed until capacity is exhausted. Indeed, the apparent gregariousness of this species in winter is probably due almost entirely to the consolidation of its prey, and the size of the grebe company observed is a loose index of the number of fish below. If successfully

The fall arrivals are somewhat unsophisticated, and will permit us to drift up close enough to observe the cruel blood-red eye which appropriately accompanies the javelin beak. The necks of these birds are very mobile and their heads are scarcely at rest for an instant, save as the gaze is riveted by fear or momentary curiosity. If fishing is dull and the observer on his good behavior, the company will float at ease rather than excite itself to pull

frightened from the water, not into it, the birds will scatter without regard to their fellows.

One sees evidence of community feeling, however, in the case of small companies, for they will move in close order, diving and resting almost simultaneously, while one bird or another assumes the duty of watchman, remaining upon the surface and paddling along slowly in the direction taken by the submerged flock.

In diving the Grebe's head describes a loop with lightning rapidity and the body springs forward as tho to accept a challenge from its vanishing leader. Considerable depths are visited and the bird is by preference a fisher of the channels, leaving the shallows to its smaller kinfolk.

If surprised at close quarters the Grebe almost invariably seeks to escape by diving, but if there is sufficient leeway, as at the approach of a steamer, it will take to wing, not without manifest exertion. A-wing it is a singular-looking creature. The legs sticking out behind and inclined upward, rather than downward, more than counterbalance the unusually long neck, so that the bird looks always upon the point of tumbling head foremost. The wings are moved quite rapidly, and the bird has no apparent control over its speed, save that it tips up somewhat before alighting. Even so, it strikes the water with a crash, with its feet spread awkwardly behind at diverging angles.

But even if he is so awkward in gait, the Grebe experiences no difficulty in making extended flights, as his presence in some shallow East-side lake in May testifies. A colony of nesting grebes has a rare fascination for the bird-man, for there is about it just that element of mystery which allures. However populous the floating city may be *per se*, the owners are pretty careful to keep away while it is under review. It is only by stealth that one can unravel the mysteries of grebe-town, and a week's study leaves one far from satisfied.

The requirements are an extensive area of water plants, preferably arums, but bulrushes will do; shallow water to match; and fishing privileges in the open. The depth of water in the lakes is likely to vary from year to year, and the nesting ground may be shifted to correspond, but the nests are usually placed in from two to ten feet of water. For their construction the birds secure fresh materials, using chiefly the green stalks and the root stalks of the arums, if in shallow water heaping the materials up from the bottom until the mass rises several inches above the water; if in deep water, forming a floating island loosely anchored to the surrounding vegetation. But in either case it is large enough and strong enough to support the weight of the sitting bird above water.

Here from three to five eggs are laid, of a delicate greenish blue color when fresh, but soon fading and becoming discolored thru contact with

decaying vegetation. The Western Grebe takes less pains than most members of its group to cover its eggs before leaving the nest. Occasionally a few coarse grasses are pulled over the eggs, and now and then a nest is really covered. The eggs are subject to many vicissitudes. Ravens esteem them great dainties. Forster's Tern does not, apparently, appropriate the eggs, but makes no scruple in driving the rightful owner from a nest which she happens to covet for her own uses. One wonders at the tame submission of a bird so splendidly armed, but the



Taken at Brook Lake.

NEST AND EGGS OF WESTERN GREBE.
NEST PROBABLY CONTAINS EGGS OF MORE THAN ONE BIRD.

Photo by the Author

Terns are really very ugly and have the advantage in being able to strike from above.

All these sources of annoyance, however, pale into insignificance before the devastation of a storm. Having a Grebe colony of some fifty nests under surveillance, I once lay out thru a series of thunder-storms on the night of May 31st, 1905, (they were making of the Big Bend wheat crop that year). In the morning I found that half of the Grebe nests had been wrecked and their contents scattered, while many of the re-

mainder were badly injured. Two days later it was comical to note the confusion of ownership which necessity's law had brought about. Scarce a well-made nest but contained eggs of homeless neighbors. Two held seven, and one, eight, from half as many contributors. In most cases these eggs were either abandoned outright by the one imposed upon, or else covered over by a new nest hastily improvised.

After noting the natural fate of unclaimed eggs, I am less reluctant to confess that Grebe eggs formed an important article of my solitary diet during a five days' halt in the vicinity. Of course, only fresh eggs, one from a nest, or waifs, were taken. In flavor they are really deli-



Photo by the Author.

YOUNG WESTERN GREBE.

cious, superior, I believe, to hens' eggs, and especially because of the delicacy of the albumen, which does not cook white, but remains semi-transparent.

Upon another occasion in my zeal to obtain a few fresh eggs for culinary purposes, I sampled several nests at the rate of one each. But when one of the *eggs* shouted lustily in remonstrance (the tin can affording a fine sounding board for the display of this precocious warbler's powers), I desisted and made amends by bestowing the entire collection upon the nearest nest. Later, under the guidance of a clamorous flock of terns, who were hovering over him and diving down inquisitively, we came upon a lost chick. He was a curious little fellow of a stone-gray color, darkest

upon the back of the neck and lighter to whitish upon the underparts, and boasting six and a half inches of length *including feet*. Baby Spearbearer was not in the least shy; on the contrary he hailed us as long-lost friends, and struck out to meet us as we drew near. He had a fully developed instinct to follow cover or motion, for when we thrust him away upon the end of a paddle and dropped him in the water, he instantly struck out for the canoe again and was not satisfied until taken up in hand. It seemed cruel to desert him, but what could we do? It is easier to pet up a waif than to send it home. Moreover, possibly it was our business. Let's think, Jack. Hav'n't we heard that cry somewhere before? A hurried visit to the recently endowed nest confirmed our suspicions. The foster mother kept vigil on five eggs, but we had given her six.

Western Grebes mate faithfully and spend much time in close and amicable association with their consorts. A proud sight is the male as he rows behind or beside his mate. One I saw arched his neck like a high-checked horse with bill close in and pointing down; and he maintained this conscious attitude for a number of minutes. As he did so the black of crown and neck, set off by the curving white core of the throat, made a perfect interrogation point.

A courting evolution sometimes witnessed deserves, whatever its immediate significance, the name of wedding march, for it is a stately affair, participated in, so far as one can judge, by both male and female. In this, the female leading but probably under the instigation of the cock, they rise and tread the surface of the water standing upright the while with outstretched or quivering wings and with necks beautifully arched, and they strike the water so vigorously with their feet as to quite maintain their elevated position, and to make slow progress forward. The birds are never less than three feet apart and there is no apparent difference in behavior or interest. When a dozen feet or so have been covered by this stately march both collapse and plunge under water head first. This procession I have witnessed several times, and it was once participated in by three birds on equal terms.

These are rare glimpses. For the rest the Western Grebe is a voice, high and broken, like nothing else perhaps so much as the creak of a neglected pulley-block. *Krik, krik, krik, krik*, comes from off the blue waters of Bellingham Bay, and you think of the brown bastions and weedy recesses of Brook Lake in Douglas County. *Krik, krik, krik, krik* comes the weird cry from off the bosom of the lake, a little anxious now as you bend over the side of your canoe to count the eggs; and you pause a moment to recall the distant fir tree and to sniff the salty air of Puget Sound.

No. 356.

HOLBOELL'S GREBE.

A. O. U. No. 2. *Colymbus holboellii* (Reinh.).

Description.—*Adult in nuptial plumage:* Head with short dense occipital crest, heaviest on sides and squarely cut off behind; top of head, including crest, ridge of neck behind, and upperparts, very deep hair-brown, or brownish black with a silky sheen, pure on head and neck and wings, with slight edgings of dull buffy and ochraceous on back; primaries not different; a large white patch on central secondaries (recalling the speculum of ducks); throat and sides of head pale ashy gray, becoming white on borders; neck in front and on sides bright cinnamon-rufous, shading on fore-breast into the silvery white of remaining underparts; posterior feathers dusky-tinged; bill bluish dusky, varied by yellow on lower mandible; feet and legs black. *Adult in winter and commonly:* Similar but duller and sides of head pure white; the rufous persistent only on sides of neck, and paler, the red replaced by ashy-brown or dull whitish; not crested. *Immature:* Similar to adult in winter but duller; without any rufous; underparts grayish white; neck and breast ashy-fuscons, throat and sides of head lighter, but not white; bill lighter; feet and legs mottled with yellow. Length 18.00-20.00 (457.2-508); wing 7.70 (195.6); bill 1.90 (48.3); tarsus 2.50 (63.5).

Recognition Marks.—Something under Mallard size (owing to abbreviated tail), but appearing larger, nearer Brant size; rufous of neck, when present, distinctive; stouter, chunkier proportions, and with shorter neck and shorter heavier bill as compared with Western Grebe.

Nesting.—*Nest:* a heap of half-submerged or floating vegetation in pond or reedy lake margin. *Eggs:* 2-5, dull greenish white; except when fresh, heavily nest-stained. Av. size, 2.25 x 1.35 (57.2 x 34.3). *Season:* c. May 20; one brood.

General Range.—North America at large including Greenland. Also eastern Siberia and southward to Japan. Breeds in high latitudes, migrating south in winter.

Range in Washington.—Common winter resident, especially upon salt water; common migrant thruout the State; rare breeder upon lakes of the East-side only.

Authorities.—Chapman, Bull. Am. Mus. N. H. III. (1890), 129, 155. T(?). C&S? Rh. D. Kk. J. B. E.

Specimens.—(U. of W.) Prov. B. BN. E.

IF one frequents the beaches of Puget Sound he soon learns that there is a characteristic bird population which stretches along at just a little more than shot-gun range from shore. As he advances over the rubble or pauses to surmount a wave-worn snag, there is a sound of spattering and whistling wings ahead, followed by the inevitable line-up just out of range. In any but the summer season, Holboell's Grebe is almost invariably numbered with this shifting, distrustful company of sea-fowl, Pigeon Guillemots,

Buffleheads, Mergansers, and Scoters, but he is just a trifle more careless than the rest, for if the gun speaks he can always dive.

The adult bird customarily prepares for diving by first giving a little upward spring and then turning suddenly with the body almost clear of the water to shoot down head foremost. It is, however, quite as able as others of the family to flash out of sight without the spring-board motion, or else to fade away after the manner of the polite Frenchman. Once, upon a piece of inland water I sighted one of these birds at not over thirty yards. Really desirous of securing a specimen for the cabinet, I shot, using duck-shot and an extra rapid smokeless powder. The fellow was possessed—not only by "spirits," but by an inexhaustible fund of good nature, for each time I shot he vanished, I know not how, only to reappear instantly, unscathed and smiling, to paddle a little nearer.

Like its cousin, the Western Grebe, Holboell's is abundant upon Puget Sound in winter, but it is also more commonly found upon the larger lakes, weather permitting. It is even more prevalent during migrations, and while not nearly so gregarious as the other species, birds are often of a mind regarding the desirability of certain stretches of water. Thus, on the 19th of April, 1906, I encountered a scattered flock of over a thousand individuals in the channel off Port Townsend.

Compared with the preceding species these birds are shorter and stouter as to bill and neck, and they do not present so fierce an appearance, altho still boasting the carmine eye. The neck, also, is never of so pure a white in front, and it usually retains a dull rufous wash which further serves for distinction.

The nesting range of the Holboell Grebe lies chiefly north of Washington. I have found it nesting only in Lake Chelan and in a small body of water adjacent thereto. Owing to the furtive habits of the various swamp-dwellers, it is often difficult to distinguish notes, but I have attributed a harshly raucous *caewack, aewack caewerrack* heard in June upon the Pend d'Oreille River to this species. It is generally similar to the *yark* of the Horned Grebe but has several times the volume.

Like all others of the group, the young of the Holboell Grebe tumble out of the shell into the water, and the saturated mass of decayed vegetation, which for a time held the egg, is never known as home. When the brood is hatched the young birds clamber upon the mother's back and have a ride quite to their liking. Nothing more convenient than this floating palace could be devised; besides being a raft and a diving bell(e), it is fitted up with leather-stuffed cushions for repose, and upon it meals are served frequently, a la Grebe—since it is said the mother can twist her neck around without difficulty and bestow a selected morsel upon whom she will of the expectant brood.



СЛОВО И ДУХОВНОСТЬ В СОВРЕМЕННОМ ИСКУССТВЕ

УЧЕБНИК ДЛЯ СТУДЕНТОВ

ПОСВЯЩЕННЫЙ

GRADUATE SCHOOL OF BUSINESS, UNIVERSITY OF CALIFORNIA, BERKELEY

BOELL'S
UT 1/3 NATURAL
COLOR PAINTS



Alton, 2nd

No. 357.

HORNED GREBE.

A. O. U. No. 3. *Colymbus auritus* Linn.

Description.—*Adult in nuptial plumage:* Forehead and crown, with throat and sides of head around on nape, sooty black, deepening and becoming glossy posteriorly; area included by these patches (lores and sides of crown) buffy ochraceous, changing to rufous on lores and the short dense occipital crest; neck in front and on sides and fore-breast rich cinnamon-rufous, shading on breast into the satiny white of belly; sides (well up under wing), and flank patches tinged with rufous and overlaid with some dusky; upperparts grayish black, becoming grayish brown on wings and varied by some edging of lighter grayish brown; primaries clear light brown; secondaries mostly white, forming a quasi speculum; bill black with yellow on lower mandible and tip; feet dusky externally, internally mostly yellow. *Adult in winter and immature:* No rufous anywhere; above uniform grayish black; below, including sides of head, pure white, sometimes tinged on neck and fore-breast with ashy brown; sparingly dusky-shaded on sides; bill with less black. Length 12.50-15.00 (317.5-381); wing 5.37 (136.4); bill .93 (23.6), depth at base .32 (8.1); tarsus 1.82 (46.2).

Recognition Marks.—Teal size; breeding plumage with black and red on head (especially red lores) distinctive for size; slender bill; the pure white of throat and sides of head contrasting with blackish above affords the best field mark in winter; not certainly distinguishable out of hand from the next species, in winter plumage.

Nesting.—Does not breed in Washington. *Nest:* of half-submerged or floating vegetation, usually anchored to reeds growing in swamp water. *Eggs:* 2-7, elongated oval, pale bluish white, but usually more or less discolored by nest. Av. size, 1.75 x 1.18 (44.5 x 30).

General Range.—Northern hemisphere; breeds from northern United States northward.

Range in Washington.—Common winter resident and migrant thruout the State; abundant on salt water.

Authorities.—*Podiceps cornutus*, Lath., **Lawrence**, Rep. Pac. R. R. Surv. IX, 1858, p. 896. T. C&S. Rh. D^r. Kk. B. E.

Specimens.—(U. of W.) Prov. B. BN. E.

APPARENTLY nothing is more attractive to a school of herring (all little fish which attend school are herring for practical purposes) than a maze of piles supporting a wharf. They crowd into the shadowy aisles and survey the retreating vistas with the dumb wonder of children at Karnak. A few nibble at the hieroglyphics traced by barnacles on the pillars, or tweak in mischief at the wan whiskers of the serried anemones. Suddenly a silver shudder thrills the school. A flash of white sides is followed by a dash for the depths, and there emerges from the tumult a gray apparition which resolves itself into

a panting bird. An instant gleam as of fins near the bird's beak tells you that another fish has gone to Grebe; but just how you cannot tell, for it was all so sudden. The diver pauses a moment to consider the danger of the kindly eyes that stare down at him, recalls that art is long and fish are fleeting, and is off again hot-foot to urge the merry chase under water.

They are innocent, happy, little souls, these Hornies, and one is tempted to look upon them as children, especially if he is used to the grown-up Westerns. Once I stole upon a little company at early morn, as they rested after a long migration flight. Six of the dainty creatures were dancing before me on the gently ruffled surface of the water-works pond. They saw the bird-watcher plainly enough some thirty feet away, but accepted him as a part of bountiful nature and gave themselves to slumber. In sleeping they draw the head back and settle it between the shoulders, thrusting the bill down precisely to the right. Now and then one lifts its head and describes a wary circle of reconnaissance, but is soon reassured and resumes its slumbers. While taking these cat-naps in my presence they swim and whirl automatically and maintain their general position, as tho gifted with double consciousness. There are five males in the company with one female, and the white of their breasts and throats glistens purely in the morning sun, for it is autumn; and I steal away with a sense of privilege as tho I had seen fairies caught out of bounds.

In the spring time one may inspect the wedding garments from no more romantic a position than the wharf again, before the northern bridal tour is undertaken. At such a time one rubs his eyes to see the transformation wrought upon our modest gray friends of autumn. Tawny, chestnut, chocolate, wine-red and shiny black are now in evidence, and the extraordinary ruff, or aureole, which surrounds the head, detracts materially from the solemnity of the occasion.

Birds of this species take to wing readily with or without provocation, and altho they have the grebe habit of thrusting the legs out straight behind, they are not ungraceful flyers. The wing movement is quite rapid and the white wing-patches appear prominently in flight.

It is not fair to call these birds gregarious and indeed they are usually quite independent, but common tastes make common cause and I have seen



Photo by the Author.

HORNED GREBE.
WINTER PLUMAGE

as high as a hundred and fifty of them feeding upon the shallows in the space of five acres, as the tide was coming in. It is at such times they raise a curious far-sounding note of complaint, *keogh keogh* with a nasal twang—or more sharply, *keark keark*, or even *yark yark*.

No. 358.

AMERICAN EARED GREBE.

A. O. U. No. 4. *Colymbus nigricollis californicus* (Heerm.).

Description.—*Adult in breeding plumage:* A broad fan-shaped patch of lengthened feathers on side of head, chiefly behind eye, rich straw-yellow to golden-brown; remainder of head and neck (including a prominent crest) and chest, jet black; upperparts blackish, sometimes washed on upper back with rufous; primaries chocolate-brown, washed with duller brownish; secondaries chiefly white; sides broadly rich rufous or wine-red—this color washed across breast below black and across crissum and so surrounding silky grayish white of lower breast and belly. Bill black; feet dull olive, blackening on soles; eyes flaming scarlet, their lids orange. *Adult in winter:* Upperparts and sides grayish dusky, blackening on top of head and neck (narrowly); no rufous; no unusual feathers or crests on head; throat and cheeks white; thus an obscurely colored dusky and white bird, difficult to distinguish superficially from the Horned Grebe, *C. auritus*, in winter. Length: 12.00-14.00 (30.48-35.6); wing about 5.00 (12.7); bill 1.00 (25.4), depth at nostril .22 (5.6), width .26 (6.6); tarsus 1.60 (40.6).

Recognition Marks.—Teal size; single black crest and fan-shaped yellow auricular patches distinctive in breeding plumage. In winter plumage very difficult to distinguish from the Horned Grebe;—however, note size, averaging smaller; somewhat darker colored upperparts; more distinct wash of dusky on chest; less trace of special feathering on head; bill of different proportions, somewhat flattened at base.

Nesting.—Nests in colonies. *Nest:* a floating raft of rootlets, moss, and light water-plants, moored in the deeper water at edge of swamp. *Eggs:* 3-8, light greenish blue, rapidly fading and becoming nest-stained. Av. size, 1.75 x 1.20 (44.5 x 30.5). *Season:* c. June 15; one brood.

General Range.—Western North America, north to Great Slave Lake, east to the Mississippi, south to Guatemala, breeding thruout its range.

Range in Washington.—Not common winter resident thruout the State, breeding in extensive colonies upon lakes of East-side only.

Authorities.—[*Podiceps californicus* Heer., Cooper and Suckley, Rep. Pac. R. R. Surv. Vol. XII. 1860, p. 282. "St. Mary's Valley (W. T.)," (Wyoming Territory). Not a valid Washington record.] ["American eared grebe," Johnson, Rep. Gov. W. T. 1884 (1885), 23.] **Keck**, Wilson Bulletin, No. 47, June 1904, Vol. XVI. p. 33.

Specimens.—P^t. C.

It has been a blazing day, for June, even in the Big Bend country, but now the sun has sunk behind the Cascades and the earth has already begun to exhale the fresh odors of recovering darkness. The modest chores of camp-life are done, kindling split for morning and laid away under the flap of the tent, a fresh covering of rye grass cut to cushion the bumps in the ground which gradually revealed themselves in last night's slumbers; and now we may lounge by the brink of the lake, flip pebbles at its unruffled



Photo (retouched) by the Author.

AMERICAN EARED GREBE.
IN SUMMER PLUMAGE.

face, or resign ourselves to the peace of nightfall. Most birds have properly tucked head under wing, and even the Nighthawks are less feverish in their exertions: but not so with the Eared Grebes. It is the magic hour of courtship, and near and far from the open water or its weedy margins sounds the mellow *poo-cep poo-cep* of these idyllic swains. The sound is given deliberately with a gently rising inflection, but seems to vanish into silence at the end with a sort of saber-like flourish. Now and again some Romeo, more ardent than his mates, bursts into an excited *hicko rick'up, hicko rick'up, hicko rickup*. The birds spread freely all over the lake irrespective of their nesting haunts, and so numerous are they that at times they maintain a chorus of the volume and persistency of that furnished by a first-class frog-pond in March.

How handsome these creatures really are we shall see by the morning light, when a pair of them, accepted lovers, come into our cove in quest of provender. There is no partiality shown by Nature to either sex in the way of wedding garments. The upperparts and head are of shining black save for the fan-shaped patches on the sides of the face which are whitish or straw-yellow above and rufescent below, while the sides of the bird, so prominent in a grebe, are pure rufous. The eye is

fiery red, so bright as to appear to impart a glow to the face visible to the naked eye at forty paces.

The nesting season is apparently a little later than that of other grebes; but to observation its nesting is hopelessly entangled with that of the Pied-billed Grebe. The eggs of the two species are absolutely indistinguishable. The nests, if any constant difference exists, are usually placed more in the open and in deeper water.

Several seasons ago we camped on a tiny island in Moses Lake where Eared Grebes were common and Pied-bills unthought of. The nests were sturdy platforms of bulrushes, clean-looking and fresh, floating securely in



Brook Lake.

Photo by the Author.

THE NESTING SWAMP.

ten feet of water. We accepted a set of eight in the name of science and thanked our lucky stars that there was no suspicion of plebeian strain thereto appertaining. But great was our disappointment in the morning upon seeing a Pied-billed Grebe clad in the smug humility of Uriah Heep, taking furtive observations offshore.

Better luck awaited us last year at Brook Lake where the whole Eared population, after weeks of dallying, fell to and nested. They colonized in the deep water on the lakeward side of the swamp and so thickly that one might touch a dozen nests with the paddle while the boat was at rest. We counted eighty occupied nests and as many more not quite finished in the space of an acre, on the 12th of June.

No. 359.

PIED-BILLED GREBE.

A. O. U. No. 6. *Podilymbus podiceps* (Linn.).**Synonyms.**—WATER-WITCH. HELL-DIVER. DABCHICK. DIEDAPPER. DIPPER. BLIND RAIL.**Description.**—*Adult in nuptial plumage:* Chin and throat glossy black; top of head and neck black with an admixture of brownish in hair-lines and streaks; the forehead with many shortened, webless, glossy, black shafts; sides of head gray, passing into grayish-brown on sides and front of neck; lower neck and breast and sides mostly blackish, heavily tipped in parted hair-lines with fulvous and ochraceous; underparts silky grayish-white mottled with underlying dusky, and heavily shaded on sides and behind; above clear brownish-black; secondaries varied and mottled with some white; bill short and stout, bluish-white, crossed at the nostril by a heavy black band; feet greenish-black. *Adult in winter:* Without black on head; crown dark brown shading on sides of head to whitish of throat; neck, fore-breast, and sides strongly tinged with brownish ochraceous; belly dingy white, unmottled; bill without black band. *Immature:* Like adult in winter, but sides of head with more or less distinct stripes of brown. Length 12.00-15.00 (304.8-381); wing 5.10 (129.5); bill .80 (20.3); along gape 1.25 (31.8); depth at nostril .43 (10.9); tarsus 1.55 (39.4).**Recognition Marks.**—Teal size; bill short and stout, its black band distinctive during breeding season, its shape sufficiently so at other times; head and neck brownish with dull whitish throat in winter plumage.**Nesting.**—*Nest:* a floating or half-submerged mound of decayed vegetation in open space of swamp water. *Eggs:* 4-8, dull white or pale greenish buff, usually more or less discolored by contact with water-soaked nest. Av. size, 1.75 x 1.20 (44.5 x 30.5). *Season:* c. May 20, East-side; April, West-side (Tacoma, April 7, 1906, 7 eggs); one brood.**General Range.**—British Provinces southward to Brazil, Argentine Republic, and Chili; the West Indies and Bermuda, breeding locally nearly thruout its range.**Range in Washington.**—Common resident and migrant on lakes and ponds thruout the State; occasionally taken on salt water.**Authorities.**—Lawrence, Rep. Pac. R. R. Surv. IX, 1858, p. 899. C&S. Kk. B. E.**Specimens.**—(U. of W.) Prov. B.

WE are all inclined to suspect what we cannot understand, and to dislike what persistently circumvents. The Pied-billed Grebe is the Caliban of the swamp and his ways are dark and devious. At least so we humans judge; but as cold matter of fact the Dab's only offense is his sleek innocuousness, which irritates our feelings where it does not work positive injury to society.

The trouble began when we were boys. We had been entrusted with our first gun, a re-bored army carbine, and we were intent on slaughter. We saw a duck on a pond and we tremulously pulled trigger. The landscape was suddenly blotted out and when we returned to consciousness there was no duck in sight, nor shattered remains, nor feathers. What did it mean! We knew we had not missed. Nothing could have withstood that blinding assault and at such close range. So we returned bruised in spirit, and the



Taken on Brook Lake.

Photo by the Author.

NEST AND EGGS OF THE PIED-BILLED GREBE.

neighbor boys told us with great glee that we had shot at (mark the preposition) a "hell-diver." We are not profane, but we draw a fierce satisfaction from the appellation, and we cherish our wrath against a creature which is so inconsiderate as to avoid the flash of a gun at twenty yards.

More recently we have been trying to study the Grebe's nesting habits and have made overtures, sometimes friendly, sometimes frantic; but still the wily water-witch cultivates retiracy and will not be lured or linned, save as a paludicoline pest whose specialty is alibis.

One thing is certain, the *nest* of the Pied-billed Grebe may be found. In a retired spot in a depth of water varying from six inches to as many feet, a large mound of sodden vegetable matter and mud is erected and with a hemispherical finish brought to an elevation of from two to six inches above water. If in shallow water, the mound is comparatively solid and mud is largely used. If in deep water, mud may be almost eliminated and the mass thus rendered light enough to float, giving with the waves as it swings upon concealed moorings of aquatic plants.

Here in a slight depression of the top seven or eight eggs are deposited at the rate of one a day, and incubation requires three weeks or a little over. The parents brood the eggs at night and in chilly weather, but on bright days the eggs are carefully covered with mud and close-set mosses, spirogyra and the like, and the whole smoothed over to the appearance of an emerging mud-bank.

Because one does not see the mother is no sign that she is not anxious; and if you tarry too long, the swamp will become vocal with strange gurglings and weird cries of incantation. Most memorable is an odd bubbling giggle, *keggy keggy keggy keggy keggy*, etc., rendered with great rapidity.

During the excitement of courtship the male plays the buffoon to perfection; he rushes about in the open water half submerged or dives and emerges repeatedly, uttering from time to time a single excited "aoww." Surely the very coots must chuckle to see the silly fellow, even tho they



Photo by the Author.

A COVERED NEST.

cannot give a much better account of themselves. Such an exhibition is also very imprudent according to the first canon of Podilymbine ethics, which reads: "Never do anything which by implication may be construed by robber man as betraying interest in matrimony."

Sometimes, instead of diving as quick as a flash, the bird, if it thinks itself unobserved and wishes to escape, will settle slowly into the water and disappear like a perforated tin can, without leaving a ripple behind. Once under water the diver makes marvelous progress, apparently without assistance from the wings. And if it is undesirable to appear on exhibition again, the bird requires only to thrust the tip of the bill as far as the nostrils

above the water from time to time. Thinking to test their powers both of diving and flight, I once pursued a company of twenty-five Pied-bills about a two-acre opening in the ice of the Licking Reservoir, in Ohio. The birds would neither fly nor try to escape beneath the surround-



Taken at South Tacoma.

Photo by the Author.

A NEST IN OPEN WATER.

ing ice, preferring rather to play hide-and-seek with me in the boat. Some came to the surface and got a single gulp of air, while others fearlessly presented a broadside view, and others still paddled about with only the head sticking out of water. They are said, however, to take wing easily and to fly rapidly. On land they are unable to rise and flounder about therefore quite helplessly.

This Grebe appears upon salt water more frequently, I think, than has been commonly supposed. It is nearly resident in this State, retreating

only before the ice line; and it may be that the winter birds of Puget Sound are East-side visitors, who do not care to go further south, nor yet to invade the precincts of their established brethren.

No. 360.

LOON.

A. O. U. No. 7. **Gavia immer** (Brünnich).

Synonym.—GREAT NORTHERN DIVER.

Description.—*Adult in summer:* Head and neck black with metallic reflections, most intense on lower neck; middle of the throat crossed by a narrow bar of white streaks; a similar but wider bar on each side of neck lower down; underparts pure white; upperparts greenish black, sharply spotted with white in regular transverse rows,—the spots mostly squarish, smallest on the upper back and rump, largest on lower scapulars; the sides similarly ornamented with rounded spots; sides of cervix black-and-white, streaked or striped; wing-quills blackish, with warm purplish reflections; bill black; feet and legs black externally, yellow internally; iris carmine. *Adult in winter and immature:* Above dark brown, clear and greenish glossed on crown and back of neck, feathers of the back, etc., more or less heavily tipped with ashy gray or dull buffy; entire underparts, including sides, white, shading on sides of head, or alternating with brown of upperparts in large dentations; bill light blue with dusky ridge; feet brownish dusky externally, yellowish internally. Length 28.00-36.00 (71.2-91.4); wing 14.00 (35.6); tail 2.60 (.66); bill 3.00 (.76.2); along gape 4.00 (10.1.6); tarsus 3.40 (86.4).

Recognition Marks.—Brant to Eagle size; back black speckled with white; head and neck black interrupted by white-streaked spaces; below white; large, pointed bill. Large size distinctive as compared with other divers.

Nesting.—*Nest:* a mere depression in sand or gravel, etc., near the edge of lake or pond. *Eggs:* 2, dark brown or olive-brown, faintly and sparingly spotted with darker or blackish. Av. size, 3.50 x 2.25 (88.9 x 57.2). *Season:* May 15-June 1; one brood.

General Range.—Northern part of northern hemisphere. In North America breeds from the northern tier of states northward; ranges in winter south to the Gulf of Mexico and Lower California.

Range in Washington.—Common winter resident and migrant on Puget Sound and along Pacific Coast; less common in interior waters; sparingly resident in summer on secluded lakes in the mountains and foothills—much less common than formerly.

Migrations.—Very desultory—fall migrations dependent upon stress of weather, and spring movement upon latitude (or altitude) of destination; *cross* migration, to and from sea, in September (or August) and April.

Authorities.—*Colymbus torquatus* Brun., **Lawrence**, Rep. Pac. R. R. Surv. IX, pt. II, 1858, p. 888. T. C&S. L., Rh. D., Kk. J. B. E.

Specimens.—(U. of W.) BN.

AS we gaze upon some ocean greyhound lying at her moorings, we note with kindling eye the graceful lines of bow and stern, the suggestive inclination of mast and funnel, and we declare her perfect for her chosen element, the sea. We know that a transpacific liner would cut a sorry figure on land and a sorrier still in the air, but we do not allow ourselves to be disturbed by such comparisons. Viewed strictly as a water bird, as Nature intended, the Loon is a paragon of beauty. Alert, supple, vigorous, one knows himself to be in the presence of the master wild thing, when he comes upon a Loon on guard in his native element. The bird seems to move about almost without effort, a single backward kick of one of those immense paddles serving to send it forward at any desired speed, while the head is turned inquiringly from side to side as if to take your measure. A shout, a false motion, the flash of a gun, and the wild thing has vanished, leaving scarcely a ripple to mark its recent resting place. It reappears, if at all, at a surprisingly great distance, and if really alarmed, only the head is thrust out of water to take breath, get bearings, and disappear again.

A Loon is not invulnerable, but an educated bird must be secured by stealth or guile if at all. Generations of gun practice have made the bird such an expert diver that, given room enough in which to dive, it is all but impossible to shoot one. Once on Lake Chelan, when I was really desirous of securing a specimen, I concealed myself behind an eminence with a Winchester rifle, and shot down at a supposedly unsuspecting Loon. After the first shot the bird turned and paddled slowly toward the ambushade with what seemed like an amused smile playing about his features. After the seventh shot, the disappearing target tired of the game and vanished altogether. Poor marksmanship? Not a bit of it. Expert diving! On the other hand, I shall never recall without a surge of shame another bird just off shore, which was only to have been frightened. I was in full view and brought up the shot-gun without attempt at concealment. The bird never flinched. Sheer butchery! But how is one to tell an *ingenu* from an old-timer? I have done with Loon shooting.

Under water the Loon moves with great rapidity, using its wings to assist its progress. It is thus able easily to overtake a fish, which it transfixes by a stroke of its dagger-like beak and brings to the surface for consumption. When the water is clear enough to admit of it, it is a delight to watch the air-bubbles which cling to the diver in the translucent depths, like a silvery coat of mail, and which he shakes off only upon emerging at the surface again.

In singular contrast to the Loon's facility and grace in the water, is its

behavior upon land. Since the feet are placed so far back, it must stand nearly upright, penguin-fashion, and its walk is an awkward, shuffling performance; or else, as is more likely to be the case, the bird flounders along on all fours. It is said not to be able to take wing from the ground at all. In rising from the water the bird humps over in an agony of effort, rising only by slow stages, first by threshing the surface of the water with wings and feet, then by combined running and flying, until the feet clear at last, and the aspirant attains a proper motion. Once started, the Loon's flight is swift and powerful, the wings accomplishing by rapid vibration what they lack in expanse. But the most helpless act of the Loon's life is that of alighting.

One early April day upon an interior lake, the author with a companion had the combined good-and-ill-fortune to be caught out in a skiff at the approach of a violent storm. There was a considerable flight of Loons in progress; but many of the birds being warned by the storm signs, began to settle from invisible heights toward the welcoming lake. This they did, not by inclining the wings, but by moving in small circles, with wing beat restrained to an apparent minimum; thus sinking slowly thru the operation of gravity. As they neared earth, the earlier arrivals circled overhead in stately squads, and exchanged greetings or inquiry with others already seated upon the water. A soft, mellow, mirthless laugh, *Whooogh, hoo hoo*, would ring out over the lake and be answered from a distance, perhaps a mile away. When the mind of a new-comer was thoroly made up to the painful necessity, say at a hundred yards, he ceased beating the air, set the wings stiffly, and began to *fall* obliquely toward the water. No doubt he dreads the shock, but the very desperation of resolve is painted on every feature, till—crash! goes the luckless fowl and is momentarily lost to sight in the upheaval of waters. Some fall like spent meteors, until it would seem they must perish in the shock, or at least break bones; especially, since the bird invariably strikes the water with outspread wings. No casualties result, however, and a few, more expert, come at such a low angle as to distribute the force of impact in a long furrow. Talk about "shooting the chutes"; it was no Yankee who invented that game. It was a Loon.

Fast and faster came the descending birds, and less and less pains did they take with the manner of descending until, when the storm-cloud burst in good earnest with an all-obliterating crash of rain, the last Loon had been gathered to his fellows, and the birds raised an exultant chorus of wierd laughter.

Because of its infirmity of gait, the Loon usually nests quite near the water's edge, on some wood-bound lake or solitary mountain mere, so that it may glide into the water unobserved, at the approach of danger. And because the eggs are of such a perfect mud-color themselves, there is little attempt made to conceal the nest. On the contrary, a position on some promontory, or projecting log, is chosen, so that the bird may command with its watchful eye a wide

stretch of territory. Some of the lakes lying along the western foot of the Cascades contain submerged forests, and the Loon asks nothing better for a nesting site than the stub of a submerged tree broken off at the water line,



Taken on Vancouver Island.

Photo by W. I. Burton.

NEST AND EGG OF LOON.

upon which he may heap a miscellaneous mound of grass, moss, roots, and vines. The external diameter of this nest may be as much as three feet and its depth one; but another time the bird may deposit her eggs on a sandbar with little or no pretense at a nest.

Young Loons "dive from the shell," and master water thoroly before they dream of flying. Soon after the chicks are brought off, the parents separate for the rest of the season, the male retiring either to some unfrequented lake or to the sea-coast, to undergo the summer moult. At this season both birds cast their feathers, so thoroly indeed, as to be for a time quite incapacitated for flight. When the young birds can use their wings they are taken to salt water, and lead thenceforth an idle life, whose chief, or perhaps the sole, anxiety is the dodging of bullets.

No. 361.

BLACK-THROATED LOON.

A. O. U. No. 9. *Gavia arctica* (Linn.).

Description.—*Adult in summer:* (Somewhat similar to preceding species but top of head, and nape, *bluish gray*); chin and throat black with violet and purplish reflections, shading into dull smoke-gray on crown and light ashy on hind neck; a patch of abrupt white streaks on side of upper throat, and below this a necklace of sharp white streaks across it; upperparts brownish black with purplish reflections; feathers of scapulars and interscapulars each with subterminal squarish spot of white, thus forming four patches of transverse white rows; wing-coverts speckled with smaller oval white spots; below white, abruptly defined from throat, less so from black of sides and flanks, shading thru patch of sharp black-and-white streaks on sides of neck and breast; bill and feet black; irides red. *Adult in winter, and immature:* Corresponding closely with similar stages in *G. immer*, and distinguishable with certainty only by smaller size. Length 27.00 (685); wing 11.00 (279.4); bill 2.00 (50.8); tarsus 2.60 (66).

Recognition Marks.—Brant size; like *G. immer* but smaller; top of head and nape in summer plumage bluish gray; *without* white speckling on back, as distinguished from *Gavia stellata*; not to be distinguished out of hand even in breeding plumage from the next "species"; larger.

Nesting.—Does not breed in Washington. *Nest* and *Eggs* as in preceding. Av. of eggs, 3.15 x 2.05 (80 x 52.1).

General Range.—Northern part of the Northern Hemisphere; common in Arctic America; rare or casual in winter in northern portions of the United States, chiefly east of the Rocky Mountains.

Range in Washington.—Rare winter visitant—two records of occurrence on Puget Sound.

Authorities. Rhoads, Auk, Vol. X, Jan. '93, p. 16.

MR. SAMUEL N. RHOADS was the first to record the occurrence of this species in Washington. Reporting upon his reconnoissance in 1892, he says of it: "A female was secured at Nisqually and others noted there during

early April." Mr. J. M. Edson, also has secured specimens at Bellingham, one of which now reposes in the collection of the State Normal School at that place. It may be these birds are more common than we have supposed; and since they are abundant during the breeding season in southwestern Alaska, their presence may be expected here at any other time.

At the mouth of the Yukon the Black-throated Loon arrives a little later than the commoner sort, *G. stellata*. Like the latter species, it resorts to the smaller ponds to breed, and its eggs are laid on the bare mud at the water's edge without pretense of nest lining. If the wind comes from certain quarters, the eggs may be drenched in the rising water. The young Loons hatch by the first of July, in spite of these hardships; and when able to fly, are conducted to salt waters to spend the remainder of the northern season.

No. 362.

PACIFIC LOON.

A. O. U. No. 10. **Gavia pacifica** (Lawr.).

Synonyms.—WESTERN LOON. LAWRENCE'S BLACK-THROATED DIVER.

Description.—Like foregoing, but decidedly smaller, bill slender, culmen straighter, gray of hind-neck more extensive and averaging lighter. Length about 24.00 (609.6); wing 11.70 (297.2); bill 2.12 (53.8); tarsus 2.45 (59.7).

Recognition Marks.—Brant size; small size and *black* throat distinctive (save for rare *G. arctica*) in spring; *no* white above in winter.

Nesting.—Does not breed in Washington. *Nest* and *Eggs* similar to those of *G. immer*. Av. size of eggs, 3.10 x 1.90 (78.7 x 48.3).

General Range.—Pacific Coast of North America, breeding in Alaska; south in winter to Cape St. Lucas.

Range in Washington.—Abundant winter resident and migrant, Puget Sound and Pacific Coast.

Authorities.—*Colymbus pacificus*, Lawrence, Rep. Pac. R. R. Surv. IX. pt. II. 1858, 889 & 890. C&S. L². Rh. Kk. E.

Specimens.—B.

DIVERS of this and the succeeding species throng the channels of Puget Sound and contiguous waters thruout the winter, or, for variety, let us say the rainy season. They are disturbed by every passing steamer, and are known chiefly by sea-farers as picturesque objects on the horizon. It is considered a mark of ill-breeding on the part of Pacific Divers to sit in the presence of an approaching steamer—there might be ladies aboard. Hence, while the beauty-laden boat is yet a great way off, the bird summons his forces, brings his feet as near as possible to his nostrils, struggles manfully with his awkward fate,

and finally emerges from his watery bed, a polite, albeit very ungainly creature. As the bird rises in air the head and feet, which were last to leave the water, gradually drift apart, the head is thrust forward, the feet backward to the natural limit, the wings move thru an exaggerated arc, and the bird goes on his way rejoicing, a conscious Beau Brummel of the seas.

There really is not much to say beside about the Pacific Diver in Washington. I have seen thousands of them—never one at close quarters. Indeed, the only lead you can get upon their identification is by drawing lines of reference to their distinguished kinsman, the Great Northern diver, thus: they are not so large; not so black; do not ride so high in the water; are not so bold; are much more numerous; etc. They are said to nest in the Barren Grounds; and in the Arctic North beyond the ken of our better known Alaskan pioneers. Since, therefore, their hearts are in the high (north) lands, they will have to pardon our inattention, as we their inconspicuousness.

No. 363.

RED-THROATED LOON.

A. O. U. No. 11. **Gavia stellata** (Pontopidan).

Synonym.—RED-THROATED DIVER.

Description.—*Adult in summer:* Top of head and hind-neck along crest black, the latter streaked with white; throat and sides of head and neck plumbeous gray; front of neck rich chestnut; sides of breast heavily streaked or striped with black and white; upperparts and sides brownish dusky, spotted rather finely with white, the spots mostly oval or elongate oval and largest on lower scapulars and tertiaries; remaining underparts white; the longer under tail-coverts and a bar across the base of shorter ones dusky; tail narrowly tipped with white; bill black. *Adult in winter and immature:* Without chestnut on neck; appearing much as in corresponding stage of *G. immer*, but the back, etc., always more or less spotted with white. Length 24.00-27.00 (609.6-685.8); wing 11.00 (279.4); tail 1.80 (45.7); bill 2.00 (50.8); tarsus 2.80 (71.1).

Recognition Marks.—Brant size; somewhat like *G. pacifica*, averaging larger; chestnut of throat distinctive in summer, and spotting of upperparts unique in winter.

Nesting.—Does not breed in Washington. *Nest* and *Eggs* as in preceding species. Av. of eggs, 2.80 x 1.75 (71.1 x 44.5).

General Range.—Northern part of northern hemisphere, migrating southward in winter nearly across the United States.

Range in Washington.—Common spring and fall migrant; winters sparingly on Puget Sound.

Authorities.—*Colymbus septentrionalis* Linn., **Lawrence**, Rep. Pac. R. R. Surv. IX, pt. II, 1858, p. 891. C&S. 1, 2. Rh. Kb. Kk. B. E.

Specimens.—B.N. E.

WHILE far less wary than the last named species, *Gavia stellata* is by no means a conspicuous winter resident and migrant along Puget Sound waterways and the Pacific Coast. If the bird-watcher has opportunity to spy upon one of these birds from a shore blind, he may satisfy himself only upon making out the white speckles of the bird's back; for this mark alone distinguishes it with certainty from other Loons in winter. In spring, however, the bird may pass the bows of a steamer close enough to permit a good view of the rich chestnut gorget contrasting with surrounding gray.

Red-throated Loons are more numerous during migrations than in winter; and this fact, as compared with *G. pacifica*, comports with the more southerly summer range of *stellata*. Of their occurrence in Alaska, Nelson says: "At Saint Michaels and the Yukon delta they arrive with the first open water from May 12 to 20, and by the end of this month are present in large numbers. Their arrival is at once announced by the hoarse, grating cries, which the birds utter as they fly from place to place, or float upon the water. When the ponds are open on the marshes the Red-throated Loons take possession, and are extremely noisy all through the first part of summer. The harsh *gr-r-ga gr-r*, *gr-r-ga, ga, gr-r*, rising everywhere from the marshes during the entire twenty-four hours, renders this note one of the most characteristic that greets the ear in spring in these northern wilds."

No. 364.

TUFTED PUFFIN.

A. O. U. No. 12. ***Lunda cirrhata*** Pall.

Synonym.—SEA PARROT.

Description.—*Adult in breeding plumage:* Sides of head, narrowly, extreme forehead, and chin, white; the area continued backward over and behind eye is lengthened, undulating plume-tuft of close-set, silken feathers, changing posteriorly to deep straw-yellow; general color of remaining plumage black, bluish above, sooty-brownish below, changing to sooty-gray on belly; wings and tail black, browning on inner webs; lining of wings smoky gray. Bill highly compressed, outline of culmen doubly convex, the distal portion of upper mandible marked by two or three curved grooves convex backward; distal portion of bill vermilion, basal plates yellowish horn-color; iris last-named shade to white; eye-ring vermilion; feet vermilion with black nails. *Adult after the breeding season:* Without crests; white of face replaced by dusky; bill smaller and dark-colored basally, seven deciduous plates having been shed; iris "pale blue"; feet "pale salmon flesh-color." *Young:* Like adults in winter, but bill smaller and weaker, without grooves and saddled at base with soft dark skin. *Downy young:* Nearly uniform slaty black; bill black with outcropping of dull red near the middle; first feathers on belly pure white. Length of adult: 15.00-16.00 (381.00-406.4);

wing 7.75 (106.9); tail 2.75 (69.9); tarsus 1.30 (33); bill (chord of culmen) 2.40 (61), greatest depth of bill 1.90 (48.3).

Recognition Marks.—Appearing Crow size by reason of relatively short tail; black plumage with white face and tufts and large vermilion bill unmistakable in breeding plumage; size and compressed shape of bill still distinctive in winter.

Nesting.—*Egg*: single, white, usually marked obscurely with pale brown and purplish; of variable shape, sometimes nearly equal-ended, sometimes pointed at one end something like a Murre's; laid at end of burrow in earth-bank or, more rarely, in crevice of rock, or in shelter of brush. *Season*: June; one chick.

General Range.—Coasts and islands of the North Pacific, breeding on the American side from the Farallones north to Kotzebue Sound; south on the Asiatic side to Japan.

Range in Washington.—Breeding sparingly on some of the smaller islands of the San Juan group, abundantly on the Olympiades, notably Alexander Islet and Carroll Islet; seldom ventures upon Puget Sound south of Port Townsend.

Authorities.—*Mormon cirrhata* (Pall.), **Cassin**, Rep. Pac. R. R. Surv. IX, 1858, p. 902. C&S. L¹. Rh. E.

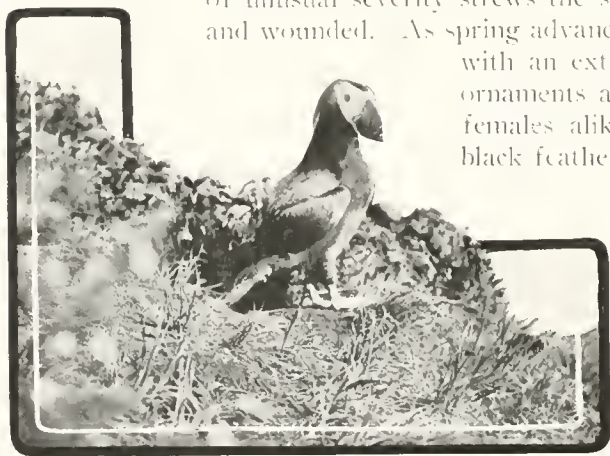
Specimens.—(U. of W.) P. Prov. C. B.N. E.

IN spite of the pleasant tale of Halcyon, the Kingfisher, no bird has yet perfected an arrangement for nesting upon the high seas. Our maritime friends are, therefore, obliged to appear ashore and give account of themselves at least once a year. Fortunately, they are most presentable at this season, and so interesting that we may well afford to overlook their long absence during the dull season.

Puffins, in common with other species of the *Alcidae*, spend the winter upon the ocean and are only seen near land when the buffeting of some storm of unusual severity strews the sand with carcasses of dead and wounded. As spring advances, these birds are provided

with an extraordinary array of nuptial ornaments and appendages. Males and females alike receive, in place of dull black feathers, a white facial mask; and

this is prolonged behind from either side into long waving feather "horns" of a rich, deep straw-color. The eyelid becomes a brilliant red; and the great red beak, always stout and strongly compressed, is further augmented basally by a new set of horny plates of a



Taken on Carroll Islet.

Photo by Lynds Jones.

A QUAIN FOWL!

dull oil-green or delicate horn-color, and these in turn exactly match the irides in tint. The feet also become bright vermilion instead of a pale salmon.

Thus gaily caparisoned, the Tufted Puffins, "Sea Parrots" now, repair to the grassy, sloping hillsides of the rocky islets which comprise the Olympiades, and renovate the old nesting burrows, or else dig new ones. They work intermittently at this. Stejneger, on the Commander Islands, noted that in the early days of the season the Puffins spent only one day ashore in alternation with two days at sea. It is probable, therefore, that the birds engage in the evolutions of courtship during these "sea-days," for I have never seen anything but the most decorous behavior ashore.

It is not easily possible to exaggerate the grave solemnity of these quaint fowls. They are absolutely silent on all occasions save when caught and harassed, when they may emit a low, raucous groan. They spend much time standing demurely at the en-



Redrawn by Allan Brooks from Photo by the Author.

"RETURNS AGAIN AND AGAIN TO SATISFY HIS CURIOSITY."

trances of their burrows, and the nearest approach to levity one ever sees is the accidental shaking of the pendent plumes when the bird turns its head.

If a hillside colony is approached suddenly from shore, the standing population, presumably males, pitches downward to sea by a common impulse; while the nest occupants come shelling out by twos and threes and dozens as one traverses the honey-combed earth. Once a-wing, the Puffin returns again and again to satisfy his curiosity, employing for the purpose great horizontal circles or ellipses, and slowing up a little at perigee. Or, if the nesting island be a small one, the Puffins will circle it a score of times, forming rhythmically

recurrent nebulae whose approach one watches nervously. You know that the birds are justly apprehensive, but there is something so weird and funereal about the whole performance! Each bird in passing pauses to "view the remains" with mildly deprecating eye, and heaves a visible if inaudible sigh of regret. Shoo! You silly fowls! We are no corpses!



Taken on Carroll.

Photo by the Author.

"THE HONEY-COMBED EARTH."

When convinced of the hopelessness of their cause the Puffins settle upon the surface of the water until the sea is black with them. Or, if reassured by the spectator's withdrawal, many of them return to take up their Quaker vigil at the burrow's mouth. Each alights with uplifted wing held well back. The wings are also lifted from time to time as tho to rest them, and they are brought into requisition as balancers whenever the bird attempts to walk. Be the going never so easy the Puffin steps as gingerly as a slack wire performer.

In glancing over a group of Puffins, one notices that some have three, or occasionally even four, transverse furrows upon the bill (the distal portion of

the upper mandible); while others have only two. There seems to be considerable variation of size and distinctness within these limits, and we are led to wonder whether this may not be an index of age, as in the case of the horns of cattle. The third sulcus, when present, appears at

the subterminal uncination of the upper mandible, and marks invariably, but not conspicuously, a greater length of the member.

A forty-five degree slope of soil is the characteristic nesting site of the Puffin. Here tunnels are driven at random to a depth of three or four feet, and so close together that once, on Ériu, by placing a foot in the entrance of a burrow and fetching a compass, I was able to touch with the hands the entrances of twenty-five others, apparently occupied. This may have been an unusually populous section, but reckoning at half that rate, an acre of ground would carry 2700 burrows. Hard or rocky soil is not shunned in prosperous



Taken on Carroll Islet.

Photo by the Author.

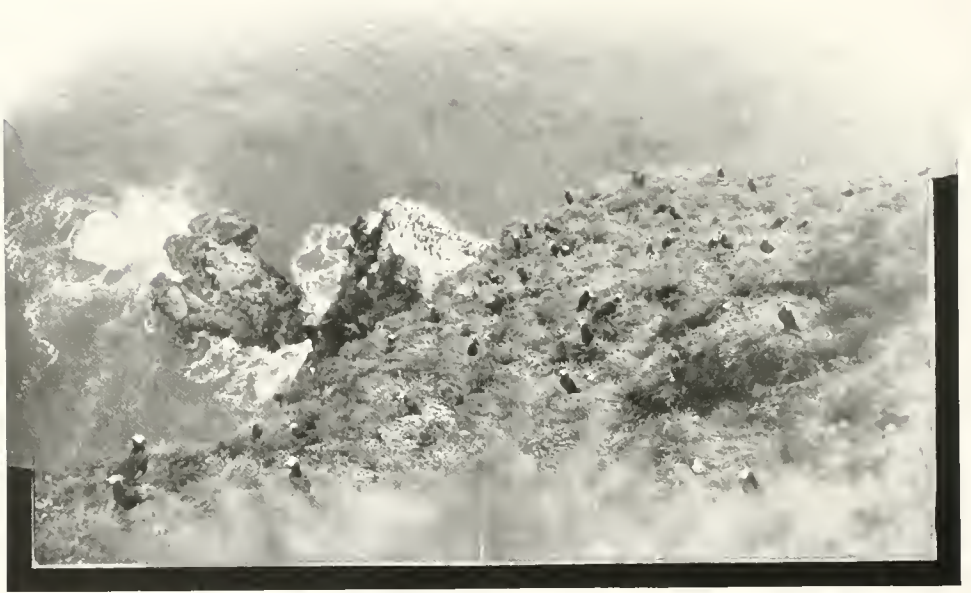
A NEST IN THE SALAL BRUSH.

colonies, but many efforts here are baffled outright and "prospects" are at least as numerous as occupied burrows. Elsewhere the top soil on precipitous, clinging ledges may be utilized, or else crannies, crevices, and rock-hewn chambers.

In skirting a patch of salal brush, which grows almost down to the edge of the cliff on the south side of Carroll Islet, we were interested to discover that the Puffins had runways thru the brush from the barren edge, and that they were depositing their eggs in grass- and leaf-lined hollows upon the surface of the ground. The distance traversed by one of these runways varied from three to ten feet and we noted eight eggs in such situations.

The most romantic situation observed was that of an egg on Williamson Rocks placed ten feet in at the end of a crevice formed by the gnawing of the tide, a "thunder jug," which at certain stages of the water boomed and gurgled below the sitting bird in a most doleful and even terrifying fashion.

Only one egg is laid, normally of a dull white hue with faint vermiculations of brown and purplish, but usually so soiled by contact with the earth as to pass for dingy brown all over. The nest lining is usually of the scantiest, a few salal leaves or crossed blades of grass; but occasionally some enterprising "parrot" provides a warmer bed.



Taken on Carroll Islet.

Photo by the Author.

A PUFFIN BANK, FROM ABOVE

The females are close sitters, and molestation by hand is unwise. The immense compressed beak of the bird is capable of inflicting a severe wound, and the Puffin is quick to use it in defense. Doubtless, also, this weapon subserves some important use in the handling of prey, but if so it is as yet unknown.

The baby Puffin breaks shell about the first of July. He is a mere puff-ball of down, for he is densely covered at birth with down at least an inch long, and of a dull slaty black throat. The only touch of color about

the infant is a showing of dull red near the middle of the otherwise black bill. The Puffin does not attain fully adult plumage until the second spring after hatching; while first year birds keep to sea and are never seen about the breeding haunts of the species.

The Tufted Puffin nests to a slight extent upon the rocks and islands of the lower Sound, Williamson Rocks, Flattop, Bare Island, etc.; but the principal colonies are all within the Government reservations off the west coast. Alexander Island harbors in the neighborhood of 5000 birds, Erin 2000, Wishaloolth as many, Cake Rock a goodly number, and Carroll between 5000 and 10,000. A conservative estimate of the breeding population of the Olympiades would be about 25,000.

No. 365.

RHINOCEROS AUKLET.

A. O. U. No. 15. *Cerorhinca monocerata* (Pall.).

Synonym.—HORN-BILLED AUKLET.

Description.—*Adults in breeding plumage:* Upperparts sooty black or glossy brownish black, varied, especially on back, tertials, and rump, by sooty-gray tips of feathers; color of upperparts shading insensibly on sides of head, neck, and breast, into dull sooty-gray or smoke-gray of throat, chest, sides, and flanks; remaining underparts white, or white faintly washed with smoke-gray; anterior margin of wing whitish; shafts of remiges whitish basally, in proportions decreasing from outermost; a maxillary and a post-ocular stripe of lengthened, lanceo-linear, white feathers; bill orange, duller along tomia, black on culmen, a horny projection above nostril at base of bill about .60 high (from nostril); a small deciduous plate at base of under mandible; feet and legs yellow above, black below; irides hazel. *Adults in winter:* Without horny appendage and infra-mandibular plate; irides white. *Young of the year:* Bill much smaller than in adult; no white stripes on head; general plumage much as in adult in winter, but browner, and white of underparts washed or tipped with sooty-gray. *Nestlings* are covered with heavy slaty black down. Length of adult: 13.00-15.50 (330.2-393.7); wing about 7.00 (177.8); tail 2.35 (59.7); bill from base of horn to tip of culmen 1.13 (28.7); depth of bill including horn 1.10-1.25 (27.9-31.8); tarsus 1.20 (30.5).

Recognition Marks.—Teal size; horn (in breeding season) and white stripes of head distinctive in adult; dull plumage with size not likely to be confused in juvenile.

Nesting.—*Nest:* at end of burrow driven 5-15 feet in perpendicular or sloping sea-wall. *Eggs:* 1, ovate, ovate-pyriform, or elliptical-ovate, dull white, immaculate, or more commonly exhibiting traces of lavender, purple, or deep brown in spots or scrawls. Av. size, 2.70 x 1.80 (68.6 x 45.7). *Season:* May 1-June 10.

General Range.—Coasts and islands of the North Pacific, north (at least)

to Sitka, and south to Lower California and Japan. Has nested as far south as the Farallones.

Range in Washington.—Common off Pacific Coast, casual on Puget Sound. Breeding stations: Destruction Island, Smith's Island(?), and (formerly) Protection Island.

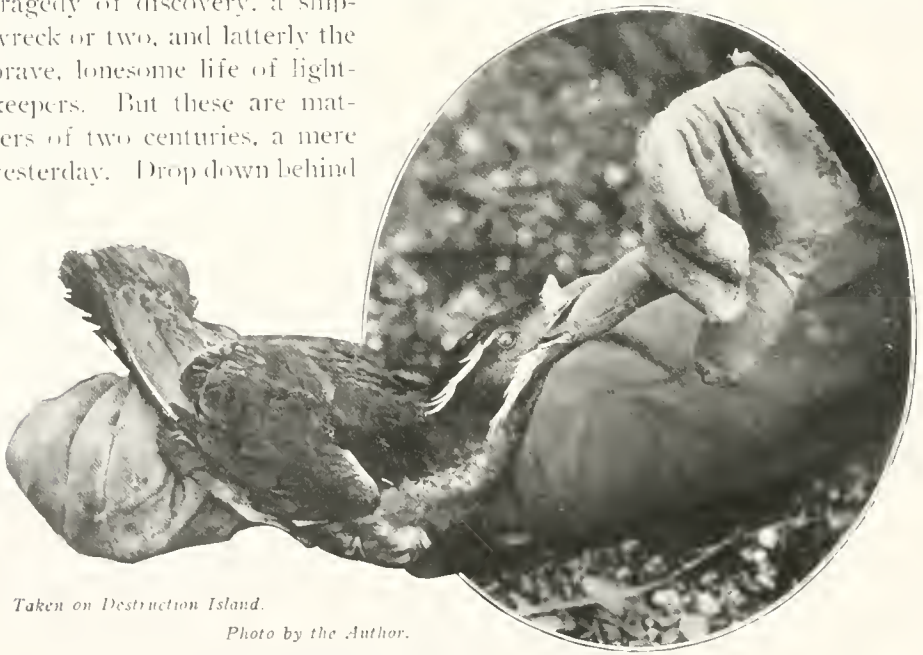
Migrations.—Unknown; but birds probably retire southward irregularly in winter.

Authorities.—*Cororhinca suckleyi* Cass., **Cassin** (in Baird), Rep. Pac. R. R. Surv. IX, pt. II, 1858, p. 906. *C. monocerata* (Pall.), Cooper and Suckley, Rep. Pac. R. R. Surv. Vol. XII, pt. II, 1860, p. 284. Kk. B. E.

Specimens.—(U. of W.) Prov. BN. C. D.

DESTRUCTION ISLAND, unlike most of the Olympiades, is not a stubborn remnant of some ancient rocky headland, but is rather a detached fragment of a valley floor,—in fact, a chip of the prosy mainland block four miles distant. It owes its preservation to a series of outlying reefs, grim bones from which the sea has stripped the flesh, and is itself a phase of dissolution. On this account its top is level, while its sides are fresh-cut and steep, altho a brave luxuriance of vegetation serves to retard, as it disguises, the progress of decay.

About this island of sixty acres gather a few memories of the human, a tragedy of discovery, a shipwreck or two, and latterly the brave, lonesome life of light-keepers. But these are matters of two centuries, a mere yesterday. Drop down behind



Taken on Destruction Island.

Photo by the Author.

GLOVES ARE RECOMMENDED.

the sea-wall out of sight of the friendly lighthouse, and you could forget that men ever lived. Nor would you suspect what is the real interest, the historically continuous interest of this spot—by day. It is the home of ten thousand Rhinoceros Auklets (*Cerorhinca monocerata*). They are the cave-dwellers of Destruction.

Late in April the Auklets, stirred by a common impulse, muster from the wide seas and move upon Destruction by night. If there has been any scouting or premature development work, it has been carried on by night only and has escaped observation. In fact, it is a point of honor among the Auklets never to appear in the vicinity of the great rookery—or aukery—by day.

At the tribal home-coming, the keepers tell us, there is a great hubbub. If the location be a brushy hillside, the birds upon arrival crash into the bushes like meteors and take chances of a braining. Upon the ground, they first argue with old neighbors about boundaries. If growls and barks and parrot-like shrieks mean anything, there are some differences of opinion discovered. Perhaps also the details of matrimony have not all been arranged, and there is much screaming avowal.

Gradually, however, order emerges from chaos, and the birds set to work with a will renovating the old home, or driving new tunnels in the loam, sand, clay, or even hardpan. The burrows are usually five to eight feet in length and about five inches in diameter, terminating in a dome-shaped chamber a foot or more across and seven or eight inches high. Each tunnel has a spur or blind alley which, presumably, is occupied by the male during the honeymoon. For lining, the nuptial chamber boasts nothing more pretentious than a few dead salal leaves and a handful of dried grasses.

The amount of labor involved in this home-delving is very considerable. My guide once took an egg from a tunnel driven ten feet straight into a clay

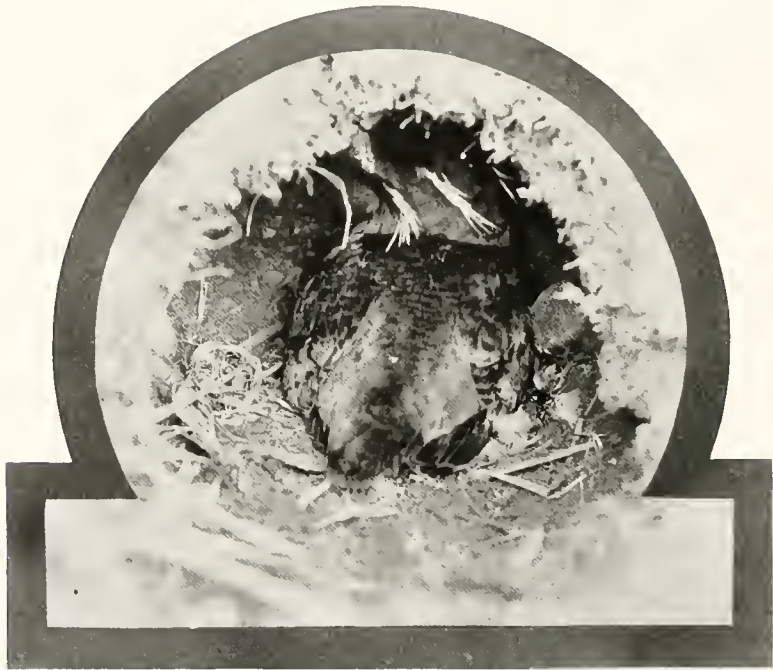


Photo by the Author.

THE BURROW'S MOUTH.

bank; and I followed another thru sand to a depth of fifteen feet, only to find it empty. This last, I take it, was the work of a jilted suitor, venting his feelings by showing the coquette what a fine house she might have had.

When the female begins to brood her single egg, the male spends his days at sea, returning after nightfall to feed his mate and, it may be, exchange places with her. The Indians take advantage of this habit to catch the birds, which they account good eating. Having first selected a populous neighborhood, they thrust grass into a set of contiguous burrows, pressing it in to arm's length for the purpose of detaining the returning bird later in the even-



Taken on Destruction Island.

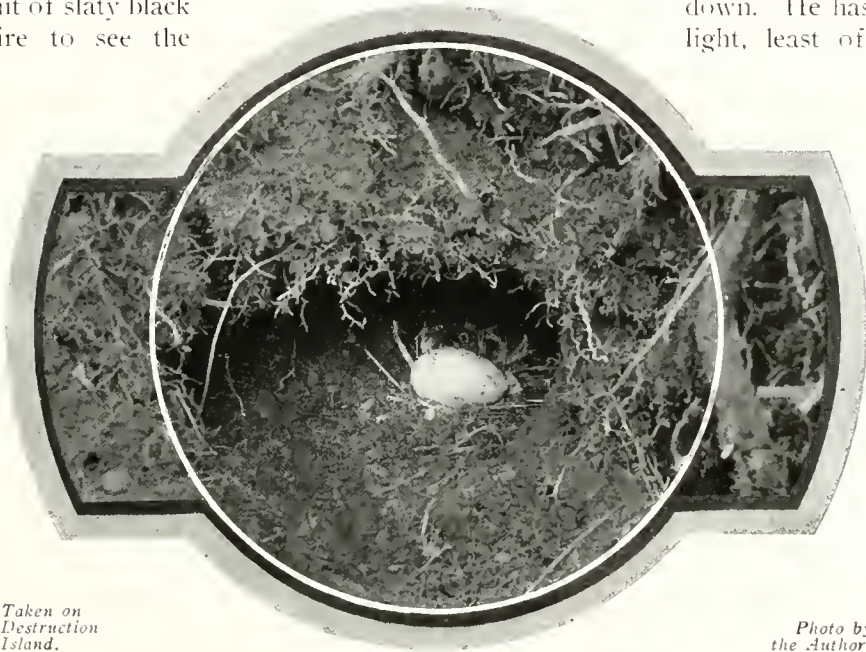
Photo by the Author.

A SULKY HEN.

ing. At nine o'clock or such a matter, they post themselves in the gathering gloom to watch their traps, secreting themselves, if need be, in the bushes. The colony is silent now, but presently there is a sudden whirr of wings, a dark object strikes the bank and disappears. Instantly the watchful native closes the entrance of the burrow and seizes the confused Auklet from behind. It is creepy business, and not less so now that the whole scene is lighted up by the accusingly benignant eye of the lighthouse. However, one may be pardoned a strictly psychological study, even in the robbing of a hen-roost.

An Auklet hen, discovered upon her nest, has all the defiant virtue of her sex and calling. The one figured herewith was sitting on nothing at all, not even a clam-shell; but neither is that original with the Auklet. She is quite ready to peck too, and a glove is to be recommended for these psychological studies. When given her freedom, the Auklet invariably pitches headlong down the declivity, barely clearing the vegetation, until she reaches the level of the water, whereupon she flies away with swift even stroke, about a foot above the surface, until lost to sight.

In June the chick hatches, a child of night: and he is appropriately clad in a suit of slaty black down. He has no desire to see the light, least of all



*Taken on
Destruction
Island.*

*Photo by
the Author.*

THE NESTING CHAMBER.

as prepared for him by pick and shovel. He feels quite ill at ease when exposed, and spends his entire time shifting about restlessly in the end of a burrow remaining to him, and searching in his soul why he may not find greater privacy.

The children of the night-shift are all alike in this, that they love darkness rather than light. That this was not always true of the Rhinoceros Auklet we have curious evidence in the coloring of the egg. Viewed in the large, the purpose of pigmentation is protective. The egg of the gull, exposed to the full glare of day, is dark-colored and so splashed and blotched with brownish blacks that it blends in admirably with its surroundings of dead

grasses and dun rocks, and is thus lost to hostile view. But when a species begins to forsake the open and there is no longer need of heavy pigmentation, the egg tends to revert to the primitive white; that is, to unpigmented calcium carbonate. Now in the case of the Rhinoceros Auklet's egg, we find traces of an ancient color pattern, undoubtedly heavy, still persisting in faint lines of umber and in subdued shell-markings or under-tints of lavender and lilac. These to the ornithologist are eloquent of a time ages ago before the race went moon-mad.

No. 366.

CASSIN'S AUKLET.

A. O. U. No. 16. **Ptychoramphus aleuticus** (Pall.).

Synonyms.—ALEUTIAN AUKLET. CASSIN'S AUK.

Description.—*Adult*: Head and neck all around, upperparts, and sides sooty- or plumbeous-black, bluish tinge clearest on rump and scapulars; wings and tail brownish dusky, paling on edges and exposed portions; lining of wing partly white; a spot of white over eye a little forward, and a touch on lower lid posteriorly; remaining underparts pure white. Bill (drying) black, changing to yellow on base of lower mandible; iris greenish blue; feet chiefly black, nails black. No seasonal changes. *Immature*: Similar to adult, but wings blacker; feet and tarsus yellow before, black behind. *Downy young*: Chiefly brownish dusky, white pattern of adult indicated by lighter gray on underparts; sides of head and throat chiefly naked, orange yellow; bill and feet as in immature. Length: 8.00-9.50 (203.2-241.3); wing 4.80 (121.9); bill .75 (19.1), depth at base .39 (9.9); tarsus 1.00 (25.4).

Recognition Marks.—Robin size; chunky appearance; stout bill; blackish and white plumage; absence of appendages or special adornments in itself nearly distinctive save as regards the slenderer Marbled Murrelet.

Nesting.—Single *egg*, pale greenish white, unmarked, placed at end of burrow three or four feet in length, or in crevices of rock. Av. size, 1.80 x 1.33 (45.7 x 33.8). *Season*: April-June; one brood.

General Range.—Pacific Coast of North America, breeding from the Aleutians south to the Farallones and San Geronimo Island.

Range in Washington.—Little known resident of coastal waters, breeding sparingly on some of the Olympiades (Alexander Islet, Dhuoyuatzachtahl, Carroll Islet, etc.). Casual on Puget Sound.

Authorities.—["Cassin's auk," Johnson, Rep. Gov. W. T. 1884 (1885), 23.]

Rhoads, Proc. Acad. Nat. Sci. Phila. 1893, 30. L².

Specimens.—C. D.

WE were taking the oölogical horizon of Dhuoyuatzachtahl, the famous Petrel island of the Quillayute Needles group, and had just repaired to the saw-grass area which crowns its crest when the professor held up a pale green egg three times larger than ordinary and modestly asked if that were a Petrel's. "I should say not," the bird-man cried; whereupon the professor returned to the burrow and drew forth the owner of the egg, a strange foreign-looking bird with leaden plumage above, white underparts and a gray-green



Taken on Alexander Islet.

Photo by the Author.

CASSIN'S AUKLET, ADULT AND YOUNG.

eye which blinked and stared like that of a Czech caught smuggling. It was a Cassin Auklet, the "Kwoahlla" of which the Quillayutes had been telling us; and it was only in this random fashion that the bird was added to the list of the breeding sea fowl of the coast of Washington.

The reason for previous oversight was not far to seek, for Cassin's is an early bird, most of the burrows containing young on the 11th of June, 1907, while the Petrels were only beginning to lay. They are, moreover, desultory breeders, for fresh eggs may be found in burrows alongside of those contain-

ing young two-thirds grown. We afterward found them under widely varying conditions upon Alexander Island and Habaahdayeh, but gleaned scant information as to their habits—by day. On this account, therefore it was determined again to visit Dhuoyuatzachtahl upon the evening of June 17th.

The wind had been blowing hard all day and at evening the white-maned seneschals who guard the rock still shook their heads ominously. But we landed without further mishap than the loss of our drinking water. We



Taken on Carroll Islet.

Photo by the Author.

ENTRANCE TO NESTING BURROW OF CASSIN AUKLET.

swarmed up the rock like schoolboys, spread blankets, dismissed the Indians, and settled down to the enjoyment of a long night with the birds.

Settling to the blankets with eyes which abjured sleep was like sinking upon the cushions at grand opera, box A. To be sure we were a little early, but no matter; the performance is sure to begin on time. Meanwhile we will look at the lights. The night is moonless but so clear as to permit a rare companionship of signals, grateful on that lonesome coast. To the southward gleams the Destruction Island light, as bright as the lamp of a near neighbor.

To the north, some twenty miles, the twinkling masts of the Umatilla light-ship appear; while *mirabile dictu*, as far again may be seen the intermittent flash of old Tatoosh, the welcome Pharos of the Northwest. To eastward the lights of the Indian village blink sleepily. To westward and barely discernible, a passing steamer. Above,—but I may not tell the stars. Below—Ah, yes; beneath lies a sea of potential fire, lightless when unhindered, but flashing into a sudden fury of phosphorescence wherever the reefs oppose it. For all about us and below are rocks and reefs uncounted, black and somber save as kindled momentarily by the lucent flickerings of the surf.

The stage setting is perfect down to the foot-lights. Now for the orchestra. "*Petteretterterrell, etteretterterrell*"—it is the tap, tap of the Petrel conductor calling the island to attention. Soon ghostly forms steal about in the gathering gloom. Voice answers voice as each moment flies. The flitting shadows become a throng, and the chorus a tumult. But in the grand melange there is a new note. A quaint burring croak wells up from the ground, elfish, gruesome, portentous. The Cassin Auklets are waking up. Heard alone the Auklet chorus reminds one of a frog-pond in full cry. As one gives attention to an individual performer, however, and seeks to locate him in his burrow, the mystery and strangeness of it grows. The vocalist is complaining bitterly of we know not what wrongs. We must be within three feet of the noise as we stoop at the burrow's mouth; the volume of it is ear-filling; yet its source seems furlongs off. Now it is like the squealing of a pig in a distant slaughter pen. We lift our heads and the stock yards are reeling with the prayers and cries of a thousand victims. And now the complaint falls into a cadence, "*Let meee out, let meee out, let me out.*" A thousand dolorous voices take up the chorus. The uproar gets upon the nerves. Is this a bird lunatic asylum? Have we stumbled upon an avian mad-house here in the lone Pacific? and are these inmates appealing to the moon, their absent mistress?

Nay, rather it is the eternal infant. It is the voice of elemental hunger we hear, and we are powerless to answer. Oh, the unwearying importunity of the hungry child! Earth nor heaven shall forget him while he draws the breath of want. Listen, ocean! and hearken, ye still spaces! "*Let me eat, let me eat, let me eat!*" Anxious fathers and distraught mothers hurry to and fro under the lash of the myriad hunger cry. There are some sounds of satisfaction here and there, but they are drowned in the universal shout. Hour after hour goes by and still the fury of demand increases. Fast and faster whirls the ministering host. High and higher rolls the tumult—

"Meester Dawson! Hello, Meester Dawson!" Why—why—it's California, our Indian guide, down in the canoe; and the sun is an hour high. A lone puffin quits his post and the gulls begin to quaver, but Kwoahlla—where is he?

A Cassin Aukery is as silent as the grave in daytime. Moreover, the

adult birds are never seen in the immediate neighborhood in nesting time, and one may traverse the entire coast without suspecting their presence. In winter they mingle occasionally with like-minded divers on Puget Sound, but they are seldom distinguished and were unknown to Suckley at Steilacoom.

No. 367.

PAROQUET AUKLET.

A. O. U. No. 17. *Phaleris psittacula* (Pall.).

Synonyms.—PUG-NOSED AUKLET. PARROT AUK.

Description.—*Adult in breeding plumage:* Upperparts uniform slaty black; chin, throat, fore-neck and sides dusky, changing to white on remaining underparts; lining of wings fuscous; a line of narrow pointed white feathers starting from eye and continued obliquely backward and downward; bill with strongly convex culmen and more strongly recurved gonys (tomial correspondingly up-curved), vermilion-red, changing to horn-yellow at tip and along tomia. Size of bill slightly increased by a series of flattened pieces which are deciduous in winter. *Winter adults* are white on chin and throat as well, with the sides of the latter dusky-spotted. *Young:* No white filaments on head; a white spot on lower eyelid; upper parts as before [in adult]; under parts white, marbled and mottled with dusky ends of the feathers" (Coues). Length of adult 9.00 (228.6) or more; wing 5.40-5.75 (137.2-146.1); tail 1.55 (39.4); bill (chord of culmen) .60 (15.2); depth of bill at base .45 (11.4); tarsus 1.00 (25.4).

Recognition Marks.—Robin size; "pug-nosed" bill; white line of plumes from behind eye in adult.

Nesting.—Does not breed in Washington. Single white egg, roughened and soiled, placed deep in fissure or cranny of volcanic rock. Av. size, 2.30 x 1.47 (58.4 x 37.3). *Season:* June.

General Range.—North Pacific Ocean, breeding on the Aleutians and other rocky islets, south to Sitka and the Kuriles; south in winter to San Francisco Bay.

Range in Washington.—Probably common during migrations along the West Coast. Casual on the Straits of Juan de Fuca.

Authorities.—Dawson, Auk, Vol. XXV, Oct. 1908, p. 485. (A. W. Anthony in *epist.*).

MR. A. W. ANTHONY, who is familiar with this species in the North, recognized it in the Straits of Juan de Fuca on his winter cruise of '98-9. It is well distributed in summer thruout the Aleutian chain, but retires in winter to the open sea.

As nearly as can be determined, the peculiar retroussé effect of this bird's bill is merely ornamental, since its food comprises chiefly the tiny crustaceans taken in open water. Moreover, certain parts about the base of the bill are

deciduous at the end of the breeding season. While our esthetic sense may not exactly approve of the mandibular extravagances which birds of this group indulge at the approach of spring, we should remember the grotesque ear-rings and lip-ornaments which have pleased the fancy of our own species at times, and we will not be in haste to criticize the bizarre tastes of these little savages of the sea. Nature may be amusing if she likes. Why not?

Birds of this and allied species exist in Bering Sea by countless millions, and they form a not unimportant element of Eskimo fare. Hungry whalers also sample them on occasion, but their flesh is not seductive to the Caucasian palate. The Paroquets nest in the abundant crevices of the rough volcanic islands, placing their single white egg upon the bare rock or soil. The males spend most of the day at sea fishing, but return late in the afternoon to feed their mates. After this and until four or five o'clock in the morning they may be seen dozing at the entrance of their nests. "They have a low, sonorous, vibrating whistle and do not fly in flocks like most other Auks."

No. 368.

LEAST AUKLET.

A. O. U. No. 20. *Æthia pusilla* (Pall.).

Synonym.—KNOB-NOSED AUKLET.

Description.—*Adults in summer:* "Bill small and simple, but stout for its length, scarcely higher than wide at base, rather obtuse at tip. A small deciduous knob or tubercle at base of culmen. No crest; but front, top, and sides of head more or less thickly lined with delicate white thready feathers; a similar series, exceedingly fine, from eye along side of hind head and nape. Excepting these filaments and more or less white on scapulars and tips of some secondaries, entire upper parts glossy black; region about under mandible, and a few feathers along sides of body and flanks, blackish; throat white; under parts white, more or less extensively mottled or clouded with blackish, often uninterrupted on fore breast. Lining of wings white, with dark feathers along the edge. Iris white. Bill red; knob and base of upper mandible dark. Legs (dry) dark; front of tarsus and tops of toes lighter. *In winter:* No knob; bill brownish; little white bristles of head retained but less developed; white of under parts extensive, reaching far around sides of neck. *Young:* Like winter adults, but with smaller bill and lacking white bristles of head and with more white on scapulars" (Coues). Length of adult: 6.50 (165.1); wing 3.75 (95.3); tail 1.25 (31.8); bill (chord of culmen) .40 (10.2); height of bill at base .30 (7.6); tarsus .70 (17.8).

Recognition Marks.—*Sparrow size*; the smallest of the *Alcidae*.

Nesting.—Does not breed in Washington. Single egg deposited in crevice of rock in sea-wall or volcanic cliff. Av. size, 1.55 x 1.12 (39.4 x 28.5).

General Range.—North Pacific and Bering Sea, south regularly to Sitka and Japan; casually (?) to Washington.

Range in Washington.—Casual (?) in winter on Puget Sound.

Authorities.—*Simorhynchus pusillus* (?), Rhoads, Auk, Vol. X. Jan. 1893, p. 16, 17.

WE humans are so impressed with the majesty of the ocean that we somehow expect its familiar denizens to keep pace with it. "Leviathan" is the symbol of marine aquatic life, and the Wandering Albatross with his fourteen-foot expanse of wing is considered to have arisen to the occasion in matching the ocean's might. It gives one a whimsical sense of incongruity, therefore, to see a mere dot of a bird extricate itself from the confusion of waters and go winging about its own business. What impudence is this? or what oversight of old Neptune is it which permits this midget to cross uncharted leagues and to conduct itself in all ways like a grown-up?

The authority for including this as a Washington bird appears to rest upon the account of a wounded bird pursued but not taken by Mr. Edwards, senior, on Commencement Bay in the winter of 1888. We have also seen what must have been these birds in the same waters, where Marbled Murrelets notably abound.

Nelson says: "Of all the water fowl of Bering Sea this trim little bird is the most abundant. * * As we lay at anchor close under the Big Diomedé (in Bering Strait) the cliffs arose almost sheer for hundreds of feet. Gazing up toward one of these banks we could see the air filled with minute black specks, which seemed to be floating by in an endless stream. The roar from the rush of waves against the base of the cliffs was deadened by the strange humming chorus of faint cries from myriads of small throats, and as we landed, a glance upward showed the island standing out in bold, jagged relief against the sky, and surrounded by such inconceivable numbers of flying birds that it could only be likened to a vast bee-hive, with the swarm of bees hovering about it."

No. 369.

ANCIENT MURRELET.

A. O. U. No. 21. *Synthliboramphus antiquus* (Gmel.).

Description.—*Adults in breeding plumage:* Head and neck sooty brown, blackening on crown, an invasion of white from underparts on sides of neck; a white stripe, made up of sharply-projecting white feathers, starts over each eye and, running obliquely backward and downward, nearly meets fellow on nape; touch of white on each eyelid; upperparts in general dark bluish ash, becoming sooty on edges and wing-tips; shoulders sharply streaked with white; underparts

pure white; bill yellow or whitish, blackening at base, and (more sharply) on ridge; feet and legs yellowish with abrupt black line on back of tarsus, webs blackish, nails black. *In winter:* Plumbeous of upperparts less pure; more white on eyelids; white feathers of crown and shoulder-patches nearly wanting; sooty more extensive on nape, replaced on cheeks and throat with plumbeous dusky, shading into pure white of underparts; forehead overcast with plumbeous; sides plumbeous or dusky in patchy pattern. Length 9.50-10.50 (241.3-266.7); wing 5.50 (139.7); tail 1.60 (40.6); bill .60 (15.2); depth of bill at base .30 (7.6), width .20 (5.1); tarsus 1.00 (25.4).

Recognition Marks.—Robin size; white crown-stripes distinctive in summer. In winter nape more broadly sooty than *B. marmoratus*, bill much shorter and showing yellowish on sides; chin and throat washed with plumbeous dusky where *B. m.* is pure white.

Nesting.—Does not breed in Washington. *Nest:* a burrow in bank or crevice in cliff. *Eggs:* 2, buffy white, marked with light brown of various shades, according to depth in shell; shape elliptical ovate. Av. size, 2.40 x 1.40 (61 x 35.6). *Season:* c. July 1st; one brood.

General Range.—Northwest coast of North America, breeding on the islands of Bering Sea and southern Alaska; south irregularly in winter as far as southern California.

Range in Washington.—Probably not uncommon in winter and during migrations off West Coast; casual upon the Straits and on Puget Sound.

Authorities.—*Brachyramphus temminckii* Brandt, **Cassin** (Baird) Rep. Pac. R. R. Surv. Vol. IX, pt. II, 1858, p. 917 (Specimen referred to recently identified by Dr. C. W. Richmond as *S. antiquus*). C&S. Rh.

Specimens.—Prov. C.

THIS quaint amphibian is called "the old man" by the natives of the Commander Islands where he summers. In winter he renews his youth by dropping the hoary strands which adorned temples and hind head, and at this season sometimes ventures south, where he may not easily be distinguished from his kindred Triton, the Marbled Murrelet. Mr. Allan Brooks, however, has seen a specimen of this species taken in the Straits of Juan de Fuca, and this romantic thorofare appears to be the winter trysting place of many *inconnus*.

No. 370.

MARBLED MURRELET.

A. O. U. No. 23. **Brachyramphus marmoratus** (Gmel.).

Synonyms.—TOWNSEND'S MURRELET. WRANGEL'S MURRELET.

Description.—*Adults in breeding plumage:* Upperparts brownish black, everywhere, save on wings, crossbarred with bright rusty or chestnut; primaries blackening distally, changing to gray on inner webs basally; some white marking

on scapulars; lining of wings brownish black; entire underparts, including sides of head and neck, mottled white and sooty brown (the pattern varying individually). Bill black; tarsi and webs of feet blackish; tarsi and tops of toes flesh-color. *Adult in winter*: Entire underparts pure white, the color encroaching on sides of head to lore, on sides of neck nearly (but never quite) meeting behind, on sides of rump leaving dark area an inch wide; upperparts chiefly plumbeous, changing to blackish on crown, wings, and tail; feathers of back, etc., with blackish centers; scapulars chiefly white, forming conspicuous patches; greater wing-coverts narrowly edged with white. Specimens exhibit every intermediate phase between these two extremes according to age (?) and season. *Immature* (first plumage): Upperparts like adult in winter, but blacker, without plumbeous; white of scapulars restricted; underparts chiefly white, but wavy-marked with dusky, save on chin, belly and crissum. Length of adult: 10.00 (254); wing 5.00 (127); bill .65 (16.5), depth at base .24 (6.1), width .20 (5.1); tarsus .70 (17.8).

Recognition Marks.—Robin size; in winter (when oftenest seen) to appearance a miniature California Murre; black and white coloration; sharp tapering bill with sloping forehead; short-necked and low-lying, as compared with Horned Grebe; form elongate, as compared with the smaller Anklets; chin *white*, nape more narrowly sooty, bill longer and uniformly black, as compared with the Ancient Murrelet.

Nesting.—Not known to breed in Washington. *Eggs* reported from Alaska, one or two laid in burrow or crevice of rocks, nearly equal-ended, buffy white faintly and sparingly marked with brown. Av. size, 2.20 x 1.40 (55.9 x 35.6). *Season*: June.

General Range.—Pacific Coast of North America, breeding from Vancouver Island northward; south in winter to southern California.

Range in Washington.—Abundant winter resident on Puget Sound and connected waters; casual in winter on larger fresh-water lakes; not common summer resident on Washington Sound and on the western coast; also of local occurrence in summer on the upper Sound.

Authorities.—*Uria townsendii*, Audubon, Orn. Biog. V. 1839, 251, pl. 430. Townsend, "Narrative," 1839, p. 352. C&S. Rh. B. E.

Specimens.—U. of W. Prov. B. E.

FOR those who long for "something different" we recommend a steam-boat ride along, say, Hale Passage, or across the eastern arm of the Straits on a blowy day in December. To be sure it is a bit chilly out and there are spiteful dabs of rain between whiles, but the forward deck is clear, for the helpless ones are crowded in the cabin playing poker or scowling gloomily out of the windows. We may have the bow to ourselves—you and I—and what a glorious company of sights and sounds there are about us! Every blue-gray wave has a voice, and the gray-blue wind tries every tone with its deft fingers. The chorus smites upon the prow with its never-ending climaxes of spray, to which our staunch boat opposes only its patient methodical sighing. Now the wind laughs, and while it marshals its serried ranks for a fiercer charge, our drum-

mer boy, the trusted flag-rope, beats furious tattoo. Crash! Poof! Poof! We win!

But there are those who enjoy the conflict of the storm even more than we. Above the whining of the waters and the crashing of the prow, come shrill exultant cries, *Meer-meer- meer-meer*. The Murrelets are in their element, and they shriek to each other across the dancing waters like Tritons at play. Perhaps association will partly account for it, but somehow the note of the Marbled Murrelet seems of itself to suggest piping gales and rugged cliffs beset by pounding surf. It is the articulate cry of the sea in a royal mood. And not a thousand Murrelet voices are required to transport the hearer to Alaska forthwith.

Save in summer, the Murrelets appear chiefly in pairs and it is interesting to note the harmony of action in the case of mated birds. They sit upon the water, usually abreast, from one to four feet apart, and in flight they maintain the same relation. In rising from the water they do not patter, after the fashion of the Grebe, but burst out by a sudden effort. They do not, however, always succeed in getting quickly under way, for they sometimes bump along over the surface like a skipping stone, and are even quite baffled if they are called upon to clear an unusually high wave. Once a-wing, however, they vibrate the pinions with extreme rapidity and appear to move like winged bullets.

Because so agile they are often quite venturesome, and the pursuit of fish is sometimes carried on before a wharf-load of beholders. About the docks of the Bremerton Navy-yard these birds are especially fearless. They look like little men-of-war themselves as they lie at anchor on the surface of the water; but when they get news from below by wireless, they are off like a flash, down, down into the cool green depths. They do not swim under water, but fly rather. At first one may see the wing-strokes, incisive, rapid; then only the quickly disappearing white of the bird's nether parts is visible; and lastly, a slowly rising line of bubbles which mark the first dozen feet or so of the diver's course. When surprised at close quarters by a steamship, the bird oftener escapes by diving than by flight, and so confident is he of his powers in this regard that he tarries to quench the last possible moment of curiosity before going below.

The nesting of the Marbled Murrelet hereabouts is an engaging mystery. While not nearly so numerous in summer as at other seasons, the little divers may be found thruout the length and breadth of Puget Sound at that season, and they occur in numbers along the Pacific Coast. Word comes from the Aleutians that they nest in holes and crevices along with Ancient Murrelets (*Synthliboramphus antiquus*), and there is no reason to disbelieve the report from that section, but we have found nothing of the kind here. The Quileute Indians say that they do not nest like the other sea-fowl upon the rocky islets,

but that they colonize upon some of the higher slopes of the Olympic Mountains where they lay their eggs in burrows; and one of the Indians claims to have come upon such a colony several years ago while hunting in company with a white man. The Indians at Howkan, on Long Island, Alaska, told Mr. George G. Cantwell that they supposed the birds nested high up in the mountains in hollow trees.

It sounds fishy, I know; but I have one slight confirmation for such an hypothesis. At Glacier, on the North Fork of the Nooksack River, and near the foot of Mount Baker, having risen before daybreak for an early bird-walk, on the morning of May 11, 1905, I heard voices from an invisible party of Marbled Murrelets high in air as they proceeded down the valley, as tho to repair to the sea for the day's fishing. It was too late in the season for migratory flight, and the Murrelets are not known to visit interior waters (altho I have seen them on Lake Washington in winter). Shearwaters of two species are known to nest in the high mountains of New Zealand, miles from the ocean; but such behavior on the part of any American sea-bird would be unique in our annals.

No. 371.

PIGEON GUILLEMOT.

A. O. U. No. 29. **Cephus columba** (Pall.).

Synonym.—SEA PIGEON.

Description.—*Adult in summer:* General plumage sooty black, glossed with green, pure black on wings and tail; a large white patch on wing, oval in general outline, but interrupted by strong re-entrant wedge of black on distal margin; bill and claws black, lining of mouth and feet carmine; irides brown. Plumage fading in late summer, color of wings and tail changing to gray, and white wing-patch becoming soiled with brown. *Adult in winter:* Most of head and neck, rump and underparts white; back and hind-neck black, varied by white; tail and wings black with patch on latter clean white. *Immature:* Above chiefly sooty slate; below white varied by dusky; traces of wing-patch in outcropping white; bill black; feet reddish black. *Downy young:* Sooty black bill, and feet brownish black. Length of adult: 12.00-14.00 (304.8-355.6); wing 6.00-6.50 (152.4-165.1); tail 2.00 (50.8); bill 1.30 (33), depth at base .43 (10.9); tarsus 1.20 (30.5).

Recognition Marks.—Teal size; dusky appearance; solid black with white wing-patch of ordinary plumage unmistakable; a strange pied gray bird in winter.

Nesting.—*Eggs:* 2, sub-elliptical, pale green or buffy of various shades, boldly and handsomely spotted or blotched with purplish black or deep brown, with shell markings of purplish gray; deposited on bare rock at bottom of crevice or at end of tunnel in earth-bank, or even, rarely, on ground in thick grass. Av. size, 2.40 x 1.60 (61 x 40.6). *Season:* June-July; one brood.

General Range.—Coasts and islands of the North Pacific, southward from Bering Strait to northern Japan, and the Santa Barbara Islands, California.

Range in Washington.—Common resident thruout the length and breadth of Puget Sound and adjacent waters; much less common resident on the Olympiades.

Authorities.—*Uria columba* (Pall.), Cass., **Cassin** (Baird), Rep. Pac. R. R. Surv. IX. pt. II. 1858, p. 912. T. C&S. Rh. Kk. B. E.

Specimens.—(U. of W.) P. Prov. B. B.N. E.

UNQUESTIONABLY the most characteristic water bird of the Puget Sound region is this Pigeon Guillemot, or "Sea Pigeon," as it is commonly called. It shares the latter name with the Bonaparte Gull (*Larus philadelphia*), tho the significance of it is different. The gulls are dove-like in posture (at least a-wing) and in their manner of flocking; while the Guillemot owes the name both to its plumpness and to its very unsophisticated, not to say stupid, appearance.

The Guillemot is most in evidence in nesting time; and it enjoys a more uniform distribution at this season than in winter, when there are no local ties to bind it to a given stretch of water. The impression of scarcity during winter is strengthened by the fact that at this season the birds frequent the more open waters, where they avoid close approach, whether by row-boat or steamer; and that they present a totally different appearance. In winter they are clad for the most part in a suit of spectral gray, which resolves itself, only upon close examination, into a definite pattern, or mixture, of black and white. This



A SILHOUETTE.

plumage is taken on in September, but is exchanged for the solid nuptial black (with white wing patches) early in the spring,—not infrequently by the middle of February, and occasionally by the 20th of January.

The birds are evidently proud of their "full dress" suits, and an envious company of "grays" will gather about some vigorous young buck, who has come out in a new rig early in the season, and they will gape mingled admiration and chagrin, while the lucky fellow "stands on his tail" repeatedly with slowly fluttering wings.

Notwithstanding an early exchange of vows, and many feints at nest-delving, the Pigeons do not actually nest till June; and at this season the birds may be divided roughly into two groups: those which occupy the beach bluffs of the upper Sound, Puget Sound proper, and those which frequent the coasts and rocky islets of the lower, or Washington Sound region. This division is confessedly arbitrary, and is due to the differing character of the country chosen rather than to any observed difference in the birds themselves. Be that as it may, wherever the extensive and intricate shore-line of Puget Sound presents an abrupt face of glacial drift, gravel, clay, or sand, there about a gun shot offshore, may be seen a pair of watchful black "Pigeons," swimming leisurely to and fro in pretended indifference, or drawing together for low consultation. And there, in the face of the bluff, at a height of from ten to fifty feet, may be seen the entrance of a tunnel six or eight inches in diameter, at the end of which, two or three feet in, repose two eggs—cream-colored or pale olive-buffy in tint, with bold spots and splashes of umber and chocolate. This is the stereotyped situation, to which a thousand instances exactly conform.

But among the rocky islets of San Juan County favoring conditions have induced a great variety in the nesting habits of the Pigeon Guillemot. No matter how small the rock, if it lifts a rough head clear of the higher tides, its crannies and interstices are sure to be occupied by a few pairs of these harmless sea-folk. A typical bird-rock will be dominated by a company of Glaucous-winged Gulls, clamorous, indeed, but dignified and handsome withal; and their nests will be placed in open situations on the ledges and about the rocky summits. If the place presents a sheer sea-wall, Baird Cormorants will occupy its tenuous knobs and overhung shelves. A few Tufted Puffins will circle about like unquiet spirits, silent, but mindful ever of the single egg stowed away in cave or burrow. But the real bulk of the bird population is made up by the ubiquitous Guillemot. As one clambers over the rough sides of the rookery, these birds tumble out just ahead like sleepy children, and plunge with all speed into the nearest water, by way of getting their wits collected. After a refreshing dive, they join in turn the growing company of their fellows, who bob and hiss from beyond the kelp line.

If partially reassured the bird realights upon an exposed surface of the rock, and opens a carmine mouth of inquiry. Others join him, and soon your motives are being discussed by a whining company of these wondering wights. Their only note is a cross between a hiss and a whine, and it has no great

power; but a large company of these birds can produce a mild chorus, which takes its place among those primal sea sounds which haunt the sympathetic soul forever after. It blends curiously with the voices of "the dry, pied things which be in the hueless mosses under the sea," and which are set a-murmuring when the tide runs out.

These Guillemots are not ungraceful while at rest, and it goes without



Taken on the Williamson Rocks.

Photo by the Author.

"WHEN THE TIDE RUNS OUT."

saying that they exhibit the perfection of motion in the water; but on land they move about with an awkward shuffling gait, and in their shorter flights about the rocks, they thrust out their great red feet cornerwise, and almost excite derision for their awkwardness.

They are, in the main, peaceable folk, and in these larger colonies are gregarious to such an extent that one can rarely distinguish paired birds.

On the whole, however, I am inclined to consider them strictly monogamous,—at least in the avian sense, which takes account of only one season. Sportive pursuit often takes place in the water, and the rapidity with which these birds can appear and disappear at the surface would be instructive to the aspirants of the old swimming hole.

A cock-fight between rival suitors is apt to be quite a spirited affair. As they face each other upon the surface of the water, the combatants hold their

tails, inconspicuous at other times, bolt upright; and this, with their open mandibles disclosing a bright red mouth and throat, gives the birds a somewhat formidable appearance. The actual scrimmage, however, is likely to take place beneath the water rather than upon it; and the onlooker has no means of guessing the battle's progress till the weaker bird bursts from the water like a flying fish, and so by change of scene gains a momentary advantage of his pursuer, or owns defeat outright.

During a reconnoissance among the San Juan Islands conducted in June, 1905, some Guillemot eggs were found in quite open situations upon ledges and the like; and this, from the heavy coloration of the egg, one would take to be the typical or original custom; but in the majority of cases retirement seems to be uppermost consideration in the bird's mind. Crannies, offering at least some shelter, were most frequently chosen. An abrupt



Taken on the Williamson Rocks. Photo by the Author.
PIGEON GUILLEMOT'S EGGS.

sea-wall of conglomerate, from which one of the larger, rounded, constituent boulders had fallen, afforded an ideal niche for one pair of birds. Another bird attempted a cunning sandstone chamber on a Destruction Island reef, but evidently found the narrow entrance inconvenient for an expectant mother, since she called one egg a "set." The eggs shown in the illustration are four

feet from the camera, and at the bottom of a fissure too narrow to admit the arm. Fallen masses of rock, if above the reach of high tide, are sure to shelter nesting birds between the inequalities of their support. In one instance, at least, an abandoned burrow of the Tufted Puffin was used. This burrow differed materially from the customary tunnel of the upper Sound region, in that it was driven obliquely downward in a sloping grassy hillside. Another rocky islet, "Bird Rock," in Rosario Strait, presented so few crevices that the Guillemots were impelled to resort to certain constricted patches of rank grass. Here they forced their way between the growing stems until



Taken near Port Williams.

Photo by the Author.

A TYPICAL NESTING BLUFF.

they achieved cunningly over-arched passage-ways some three feet in length, at the end of which they were content to lay their eggs.

In excavating a tunnel in a clay bank the bird uses beak and claws, and is forced at the outset to maintain herself in midair,—a task which, by reason of her shortened wings, she accomplishes with no little exertion and infinitely less grace than that, say, displayed by a Bank Swallow. Not infrequently, the bird encounters a boulder a few inches in, and then the task is all to do over again. If, however, excavation has progressed sufficiently the tunnel is continued at right angles. These tunnels are driven at any height which pleases the Pigeon's fancy, and most of them are accessible only by rope, altho Mr.

Bowles records an instance near Tacoma of a tunnel which was placed only two feet above the beach line. Incubation lasts a little over three weeks, and eggs are oftener hatched after the 10th of July than before that date. The same burrows, if undisturbed, are used year after year.

Baby Guillemots are covered from the hour of hatching with a thick black down. Their feet are pale reddish black, and their bills black with a tiny white tip. This plumage, one may readily see, is protective only in so far as it comports with shadow; the young birds, therefore, have an individual passion for obscurity. Brought to the light, the chick will not rest for the fraction of an instant, but is off instead in a tireless quest for a hidey-hole. One bird, in particular, which I was trying to photograph, nearly wore a hole thru my Job stratum. I had labored with the creature for perhaps half an hour, in vain. Finally, I put it in the bottom of a canvas canoe, divested of all hope of shelter. Not for one moment would that pickaninny pause except thru exhaustion, when its collapsed condition would have reflected, I fear, upon the artist, and might even have required explanation before the S. P. C. A. Upon recovery, instead of perking up and taking a momentary glance about, as a young gull would have done, it rose up and struck out for solitude, all with a single impulse which the waiting camera could not resolve.

Finally the chick won out. I returned it to its rocky cradle, and we both heaved a sigh of relief.

About the only way to find these little black rascals is to put your ear to the teeming rocks and listen for the subterranean peepings. They are adventuresome explorers, and it is doubtful if their own mothers can always find them.

No. 372.

CALIFORNIA MURRE.

A. O. U. No. 30 a. **Uria troile californica** (Bryant).

Synonyms.—CALIFORNIA GUILLEMOT. CALIFORNIA EGG-BIRD. FARALLONE BIRD.

Description.—*Adult in summer:* Head and neck all around warm sooty brown, changing on upperparts to dark brownish slate, feathers of back and rump with some grayish brown edging; underparts from throat abruptly pure white, the sides shaded with dusky; wing-linings white, varied with dusky; secondaries narrowly tipped with white; a sulcus, or groove, in plumage behind eye; bill and feet black; irides brown. *Adult in winter:* Similar, but white of underparts extending to bill, and invading occiput till only a narrow central stripe of black remains, shading on head enough to outline a dusky stripe behind eye. *Immature, first winter:* Like winter adults, but white not invading occiput, and less extensive on side of head, with some dusky clouding in jugulum. *Chicks* are

white centrally below, and brownish dusky above with lance-linear white streaks on head and neck. Length of adult about 15.00-18.00 (381-457.2); wing 8.30 (210.8); bill 1.85 (47), depth thru angle .57 (14.5); tarsus 1.50 (38.1).

Recognition Marks.—Crow size; black and white coloration; aquatic habits; sharply pointed wings; rapid, graceful flight; tapering head, slant of forehead nearly conformable to that of bill.

Nesting.—Single *egg* laid on ledge of rock, in cranny or in cave, sharply tapering at one end, very variable as to ground-color, ranging thru white, grayish, bluish- or greenish-white, to deep sea-green and variously marked, spotted, splashed, scrawled, or stained with brownish or purplish black or even (rarely) rufous. Av. size, 2.30 x 2.00 (58.4 x 50.8). *Season:* June; one chick.

General Range.—Pacific Coast of North America, resident from Bering Sea south to southern California.

Range in Washington.—Common resident on the West Coast, breeding on certain of the Olympiades, notably the Grenville Pillar, Willoughby Rock, Carroll Islet, Paahwoke-it, Old Rock, and Silversides. Not common winter resident on Admiralty Inlet, more common in winter on Washington Sound and adjacent waters.

Authorities.—**Rhoads**, Auk, Vol. X, Jan. 1893, p. 17. B. E.

Specimens.—(U. of W.) Prov. C. E.

AS we approach one of the towering citadels which the sea-birds have known for ages as home, our presence will not pass unnoticed. Scouting Puffins, Shags, and Gulls will have reported us unfavorably to their waiting companions; while the Black Oyster-catcher, that prince of yellow journalists, will have published a lurid account of our misdoings, when as yet we are a hundred yards removed. Conspicuous among the anxious, hurrying throng which expects our approach, are beavies of California Murres, swifter of pace and more graceful in motion than either Puffins or Cormorants; and they go hurtling about without apparent object other than to maintain their share of the general excitement.

The Murres, however, are easily satisfied, and will soon return to their ledges to await our more particular inspection. The main colony on Carroll occupies a bare shoulder not over seventy-five feet from the water; yet to reach it one must scale the island, tunnel thru the dense brush and timber on its crown, descend a Puffin slope, and take a very pretty defile, which not only looks but *is* perpendicular, run a gauntlet of croaking Shags, and arrive at last upon the proximal end of the Murre ridge. The father Murres have fled again, but a crowd of females remain huddled together, shifting uneasily upon their eggs, or backing away from the nearest ones, uttering the while apprehensive *hooes*. All the birds in turn bow extravagantly, using only their heads and sinuous necks, and so frequently that a colony viewed from above looks something like a grain field under a breeze.

If the intruder does not press his advantage too hotly, those that have

retreated from their eggs make shuffling feints at return, aided occasionally by their wings. Those that have found their eggs, bend low to inspect them, or use the bill to assist in thrusting them between their legs. Others pause now and then to yawn or to stretch the wings, beating with them rapidly three or four times before refolding. This is when I seat myself on the white-washed ledge, Turk-fashion, place the camera in my lap and begin to shuffle



From a Photograph, Copyright, 1907, by W. L. Dawson.

A NIAGARA OF MURRES.
WEST COCONY, CARRELL ISLET.

forward like a legless beggar, "snapping" momentarily. The strain of approaching danger begins to tell on the Murrine nerve; but when the last mother has fled, we have before us such a varied assortment of eggs that regret is lost in wonder.

Murres' eggs are the Majolica ware of every bird-egg collection. In ground color varying from pure white and delicate grays to beryl green or even sea green, they are speckled, splattered, blotched, and daubed with browns and blacks of a hundred shades. The more lightly marked specimens



From a Photograph, Copyright, 1907, by W. L. Dawson.

FIRING AT CLOSE RANGE.

THE NORTHEAST MURRE COLONY, CARROLL ISLET.

may have nothing by way of ornamentation beyond faint vermiculations of pale oil green and tawny olive, or else tiny irruptions of sordid lavender and Indian purple; but others may be scrawled like a Blackbird's egg with purplish blacks, or buried, like a Hawk's, in a smudge of chestnut rufous.

It would appear highly probable that this variety is introduced by nature to facilitate recognition on the part of the birds, whose property might otherwise become hopelessly confused or lost. Certainly no two adjacent eggs are exactly alike, and the differences are usually so striking that a birdless ledge

looks like an oölogical bouquet. These differences, moreover, are probably constant as between given birds. At least we found by experiment in 1907 that if a handsomely marked egg were removed, another of the same type might be expected in its place from one to three weeks later.

The peculiar shape of the egg, big at one end and little at the other, insures that the egg when disturbed shall roll in a small circle. In fact, in the fittest specimens the little end marks the center of a circle whose radius is the longer axis of the egg. This provides for maintenance on narrow ledges



A SLEEPY MURRE.
SHOWING WINTER PLUMAGE.

under ordinary circumstances; but a sudden flight of the Murres is bound to precipitate some of the eggs.

Not only are bare rocks and ledges utilized, but eggs are deposited under projecting stones, in crannies, caves, or even old Puffin burrows. When the birds nest in sheltered situations one pays a fearful price for close acquaintance. A Murre rookery is not so bad where the purifying rains have access to it, but the stench of a protected cave is overpowering. Eggs are sometimes so encrusted with filth as to be immovable, and fledglings are born into conditions which would shame harpies.

Apropos of this indifference to sanitation, may be mentioned the birds' preference for White-crested Cormorants, a favorably situated nest of the latter being almost sure to attract a small group of nesting Murres to its immediate vicinity. What compensating advantage this arrangement may afford them we do not know, for they are certainly doomed therein to a dismal martyrdom as targets for the Shag's impartial distribution of whitewash. Moreover, a hobbled cormorant is likely to become very much excited over the advent of a bird-man; whereupon, clamorous of escape, he goes straggling over these mild-mannered satellites with exquisite ruthlessness. I have seen a group of Murres bowled over in this fashion like ten-pins, not once but three times, after which the birds chiefly aggrieved managed to extricate themselves from the tangle and made off grumbling.

Murre chicks are not provided with abundant down, like baby Puffins, or even Guillemots. They are scantily supplied, instead, with a stubby sort of down, white below, and black varied by a sprinkling of stout white hairs above,—all very short. They are therefore shivery little things, and require constant brooding. It is on this account that the anxious parents venture back, singly and by groups, as soon as the armed terror begins to retire. In preparing to alight, the bird's body is brought into a vertical position, the feet are extended to the utmost to act



Taken in Seattle.

Photo by the Author.

OUR FRIEND FROM SITKA.

as brakes, and the head is thrust forward as much as possible to guide these operations, which are imperfectly correlated at best. Occasionally, a bird fails to effect a landing with ease, or at least fears failure, whereupon it turns instantly and glides downward upon extended wing preparatory to a new trial.

As we finally withdraw and the timorous ones come back, there is a ferment of readjustment on the ledge. Lost chicks pipe shrill inquiry of every bustling matron, and if mistaken, are received with spiteful jabs from bills as sharp as thorns. When, after much adversity, the right mother is found, the chick is promptly thrust between her legs, where the accommodations seem ridiculously inadequate.

The California Murre's notes consist chiefly of a mumbled and apologetic *ere ere*, or a louder *arry* of protest; but occasionally the birds explode in stentorous *keracks*, absurdly out of character with their mild eyes. The name *Arre*, which is applied to a closely related species in the North Atlantic, is manifestly imitative.

Colonies of these California Murres are found in Washington only upon the protected islands of the Olympiades: one on the Grenville Pillar, others on Willoughby Rock, Jagged Islet, Paahwoke-it, and Habaahit-ayleh (Carroll Islet). The entire breeding population might not exceed one thousand pairs, an insignificant number compared with the myriads which swarm in favored localities both north and south, and, especially, upon the Farallones of California.

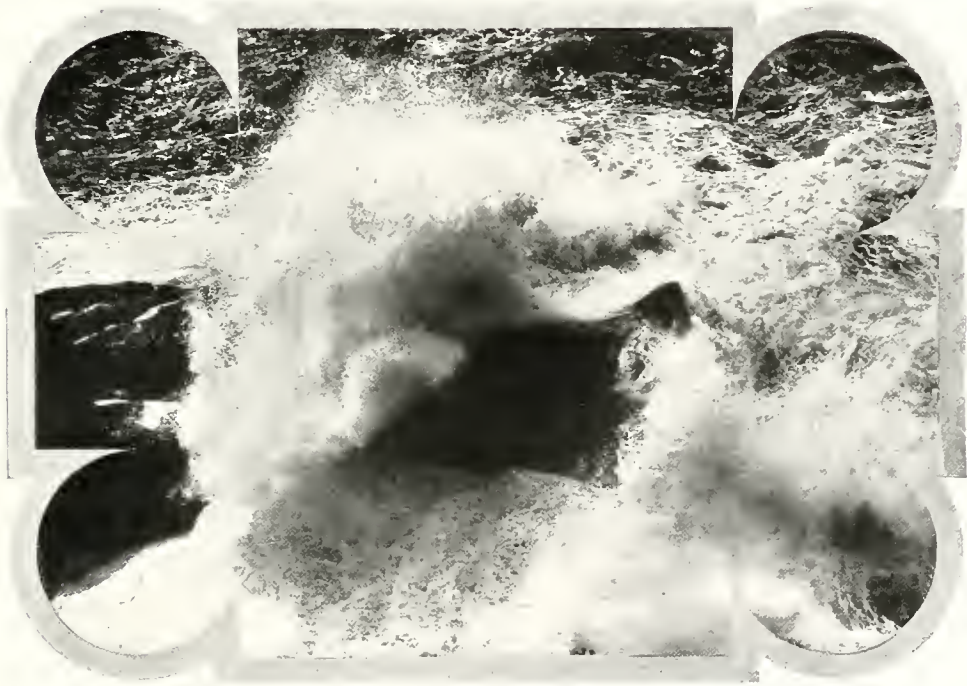
The Farallone *loomeries* (as the nesting colonies of Murres are called) are famous as the scenes of unexampled commercial plundering. "In 1850 the Farallone Egg Company was organized to collect and ship the eggs of the California Murre for the San Francisco market, and by 1856 it was estimated that three or four millions of eggs had been shipped"^a. These eggs brought nearly as much in the markets as hens' eggs, and were unquestionably good eating; but it was not a square deal for a bird whose normal output is one egg per annum. The depredations had totalled nearly a million dozen when, in 1897, the attention of the Lighthouse Board was called to the sadly depleted condition of the colonies, and the looting was stopped.

In Autumn the Murre lays aside its modest brown cloak and assumes a still soberer one of black. The white of the underparts is also more extensive in winter at which season alone this bird appears in numbers upon the channels and expanses of Puget Sound. It is probable that the winter population consists almost exclusively of Alaskan birds, while our native birds retire to the California coast. They are usually fairly wary, plunging at sight of the approaching steamer, or else making off rapidly near the surface of the water. One which appeared in the harbor of Seattle in February, however, seemed enamored of our town. This guileless creature, to our trembling surprise, allowed us to approach in a rowboat to within fifteen feet of him before diving, and that only at the snap of the shutter which marked the recording of his portrait. We waited some time for the bird's reappearance, but did not locate him again until an hour afterward and a half mile further up-shore. Again we rowed past him on the side, and then backed up from the sunny quarter. This time we got within ten feet of our friend from Sitka, as he lay, filled with a mild curiosity, full length upon the water. Again and again we pursued, having conceived the notion of snapping him in the act of diving. But each time the preparatory movements of diving were made so rapidly that

a. W. OTTO EMERSON in *The Condor*, Vol. VI., p. 62.

eye and finger could not act in time. He simply flashed out of sight,—“crawled into a hole and pulled the hole in after him”—so neatly, that nothing showed up on the plates except a jet of flying spray.

It is only fair to add that this supposed rustic did become suspicious at last of our lavish attentions, and showed us, thereupon, a clean pair of Arctic heels.



From a Photograph, Copyright, 1907, by W. L. Dawson.

THE CRASH.

SURF ON REEF WEST OF CARROLL.

Analytical Keys



TOPOGRAPHY OF A BIRD.

OUTLINE DRAWING OF A RAVEN, SHOWING POSITION OF PARTS AND PLUMAGE AREAS MOST FREQUENTLY REFERRED TO IN THE TEXT

Drawn by Allan Brooks

ANALYTICAL KEYS

BY

LYNDS JONES, Ph. D.

HOW TO USE THE KEYS.

While these keys are made for the purpose of identifying any bird in the hand, they are not intended to give more than the barest information about the bird. You should at once turn to the description of the bird whose name you have found by means of the keys, and read what may be found there before remaining content. Often an unsatisfactory identification by the keys will give you the clue so that you can turn to the body of the book and there make sure of your bird. The keys, then, are but a means to an end. They are merely for rapid determination, not for any other particular information.

There are three separate keys. First of all, a Key to the Orders; next a Key to the Families under each order; and lastly a Key to the Species under each family. You should always begin with the Key to the Orders to get your bird in the right group. Having found the order to which it belongs turn to the Key to the Families, find the order there by the number which precedes it in the Key to the Orders, and determine to what family it belongs. In like manner turn to the Key to the Species given under each family and there determine the species. The families are numbered in 1, 2, 3, order under each order, but the species are given the number which they bear in the body of the book. While the orders are not serially arranged in the Key to the Orders, they are arranged in 1, 2, 3, order in the Key to the Families. Likewise, while the species are not serially arranged in the Key to the Species they are so arranged in the body of the book.

It is important that you should know how to use the keys unless you are already familiar with most of the birds described in this book. At first sight they may seem confused, but after a little practice in the use of them they will prove very simple. Let us suppose that you now have a bird in hand which you wish to identify. Suppose it is an American Bittern. In the Key to the Orders, "I." calls for a bird with webbed or lobed feet; your bird has neither webs nor lobes, so you must turn to the contrasting character which will be under "II." which so far describes your bird. Next is "A. Legs and neck long and slender." That is true of your bird. Then the next is "I. Lores (region between the eye and bill) bare." Your bird has bare lores, so it must be one of the Herodiones, Order 9. Turn now to Order 9 in the Key to the Families. Here the first is "I. Bill straight, sharply pointed." That is right for your bird. Your bird belongs to Family 1, Ardeidae. Turn now to the Key to the Species and find Order 9, and Family 1 under it. The first here is "I. Length about 45 inches"; but your bird measures about 30 inches, so you turn to "III. Length less than 35 inches." Your bird is not pure white (A), but it is (B) "mottled and streaked with rusty and yellowish brown," so you conclude that it is an American Bittern, number 247 in the book. Turn to that number (page 622) and verify your conclusion by the minute description there given. Any other case would work out on the same principle.

Unless otherwise specified the length of a bird is the straight distance from the tip of its bill to the end of its tail when it is laid upon its back with neck and bill extended. The wing measurement is taken from the bend (the carpal joint) of the folded wing to the tip of its longest primary. The bill measurement is the straight distance from the edge of the feathers at the base of the bill on top to the tip of the upper mandible. This distance is also sometimes referred to as the chord of the culmen. The tarsus is measured from the heel joint to the angle made by the outer toe.

KEY TO THE ORDERS.

I. Feet with webs or lobes.

A. Feet with webs.

1. Webs extending to the base of the toe-nails.
 - a. Legs far back near the tail; tail short or wanting. **15. PYGOPODES.**
 - b. Legs near the middle of the body, tail well developed.
 - (1). Hind toe connected to a front one by a web. **13. STEGANOPODES.**
 - (2). Hind toe, when present, free and opposed to the front ones.
 - (a). Nostrils opening thru tubes. **14. TUBINARES**
 - (b). Nostrils not opening thru tubes.
 - (a¹). Bill with tooth-like projections along its sides. **12. ANSERES.**
 - (b¹). Bill without tooth-like projections. **11. LONGIPENNES.**
 2. Webs not extending to the base of the toe-nails. **10. LIMICOLÆ.**

B. Feet with lobes on the sides of the toes.

1. Legs far back; tail wanting. **15. PYGOPODES.**
2. Legs near the middle of the body, tail well developed.
 - a. Forehead with a bare shield. **8. PALUDICOLÆ.**
 - b. Forehead without a bare shield, bill long and slender. **10. LIMICOLÆ.**

II. Feet with neither webs nor lobes.

A. Legs and neck long and slender.

1. Lores bare. **9. HERODIONES**
2. Lores not bare.
 - a. Toes four. (*Cranes.*) **8. PALUDICOLÆ.**
 - b. Toes three. (*Plovers, etc.*) **10. LIMICOLÆ.**

B. Legs and neck not decidedly long and slender.

1. Feet very large, toes long and slender, wings moderate. **8. PALUDICOLÆ.**
2. Feet and toes moderate.
 - a. Lower part of tibia bare. **10. LIMICOLÆ.**
 - b. Lower part of tibia feathered.
 - (1). Hind toe short, elevated above the front ones. **7. GALLINÆ.**
 - (2). Hind toe, when present, on the same level as the front ones.
 - (a). Nostrils opening beneath a soft fleshy membrane. **6. COLUMBÆ.**
 - (b). Bill without a soft fleshy membrane.
 - (a¹). Bill with a tough cere at its base. **5. RAPTORES.**
 - (b¹). Bill without a cere.
 - (a²). 2 toes in front and 2 behind, or 2 in front and 1 behind.
 - (a³). Tail feathers stiff and pointed. **3. PICI.**
 - (b³). Tail feathers not stiff. **4. COCCYGES.**
 - (b²). 3 toes in front, 1 behind.
 - (a³). Middle and outer toes joined for half their length. (*Kingfishers.*) **4. COCCYGES.**
 - (b³). Middle and outer toes not joined.
 - (a⁴). Feet and bill very small and weak. **2. MACROCHIRES.**
 - (b⁴). Bill long and very slender. (*Hummingbirds.*) **2. MACROCHIRES.**
 - (c⁴). Characters various, but not combined as above. **1. PASSERES.**

KEY TO THE FAMILIES.

ORDER 1. PASSERES. Perching Birds.

About two-fifths of all Washington birds belong to this order. They are relatively small birds, the Raven being the largest, and the Kinglets are only a little larger than Hummingbirds. The development of song is the greatest within this group, and in mental capacity the much maligned Crow stands well above most Mammals. While it is not easy to describe the group as a whole one soon learns to distinguish its members from other birds readily by their combination of characters.

I. Back of tarsus rounded like the front.

- A. Bill hooked at the tip.
- B. Bill rounded, not hooked.

- 18. TYRANNIDAE. FLYCATCHERS
- 6. ALAUDIDAE. LARKS.

II. Back of tarsus sharp.

A. Bill hooked at tip.

- 1. Large, over 8.50 inches long.
- 2. Small, under 6.50 inches long.
- 3. With a distinct crest; tail tipped with yellow.

- 16. LANIIDAE. SHRIKES.
- 17. VIREONIDAE. VIREOS.
- 15. AMPELIDAE. WAXWINGS.

B. Bill not hooked at tip.

- 1. With only 9 primaries.
- a. Bill very short, wings long and pointed.
- b. Bill moderate, wings moderate.

14. HIRUNDINIDAE. SWALLOWS

(1). Bill stout, cone-shaped.

(a). Bill not notched.

(b). Bill notched.

(a¹). Nostrils exposed.

(b¹). Nostrils concealed by feathers.

(2). Bill slender, not cone-shaped.

(a). Hind claw long and straightened.

(b). Hind claw not lengthened.

2. ICTERIDAE. BLACKBIRDS, ETC.

4. TANAGRIDAE. TANAGERS.

3. FRINGILLIDAE. SPARROWS, ETC.

7. MOTACILLIDAE. PIPITS.

5. MNIOTILTIDAE. WOOD WARBLERS.

2. With 10 primaries.

a. Upper part of tarsus not divided into scales.

(1). Wing more than 3.00.

(a). With bristles at the corner of the mouth.

(b). No bristles at the corner of the mouth.

(2). Wing less than 2.50.

8. TURDIDAE. THRUSHES.

13. CINCLIDAE. DIPPERS.

9. SYLVIIDAE. KINGLETS.

b. Whole tarsus divided into scales.

(1). Tail feathers stiff, pointed at tip.

(2). Tail feathers normal.

(a). Nostrils covered by stiff, bristly feathers.

(b). Nostrils without bristly tufts.

(a¹). First primary about half as long as the longest one.

(b¹). First primary about a third as long as the longest one.

11. CERCITIDAE. CREEPERS.

1. CORVIDAE. CROWS, ETC.

12. TROGLODYTIDAE. WRENS, THRASHERS, ETC.

10. PARIDAE. TITMICE, NUTHATCHES.

ORDER 2. MACROCHIRES. Goatsuckers, Swifts, Hummingbirds.

All members of this order eat insects, but the Hummingbirds also eat the nectar which they suck from blossoms. Their great powers of flight are sufficiently shown in their great expanse of wing and extremely weak feet, and their insect eating habits by the small bill and huge mouth.

I. Wing over 6.50.

2. CAPRIMULGIDAE. NIGHTHAWK, POORWILL.

II. Wing about 5.00.

3. MICROPODIDAE. SWIFTS.

III. Wing under 2.00.

1. TROCHILIDAE. HUMMINGBIRDS.

ORDER 3. PICI. Woodpeckers.

All Woodpeckers belong to the one family PICIDÆ. Their habit of clinging to the side of a tree, bracing with the stiff tail, and of drilling holes in hard wood, are characteristic.

ORDER 4. COCCYGES. Cuckoos, Kingfishers.

The two suborders comprising this group have few external characters in common. The Cuckoos are woods birds, the Kingfisher is found in the vicinity of water. The Cuckoos are soberly colored and secretive in habits, the Kingfisher is crested and blue, and noisy. The Cuckoos eat caterpillars and other insects, the Kingfisher eats fish and probably other aquatic animals.

I. Toes 2 in front and 2 behind.

2. CUCULIDÆ. CUCKOOS.

II. 3 toes in front and 1 behind.

1. ALCEDINIDÆ. KINGFISHERS.

ORDER 5. RAPTORES. Vultures, Hawks, Eagles, Owls, etc.

The birds which eat flesh comprise this order. Their hooked bills and strong talons are adapted for catching, holding, and tearing prey. The whole group is of prime importance in the balance of nature. So few of the individuals are harmful and so many decidedly beneficial that wholesale condemnation should rather give place to commendation and protection except in cases of actual depredation.

I. Eyes set in a striking facial disk of feathers, looking straight forward.

A. Feathers on back of tarsus growing up.

1. ALUCONIDÆ. BARN OWL.

B. Feathers on back of tarsus growing down.

2. STRIGIDÆ. OTHER OWLS.

II. Eyes not in facial disk, not looking forward.

A. Head feathered.

3. FALCONIDÆ. HAWKS, EAGLES, ETC.

B. Head bare.

4. CATHARTIDÆ. VULTURES.

ORDER 6. COLUMBÆ. Doves and Pigeons.

There is only one family in this order, the COLUMBÆ. The general characters of the birds are well illustrated by the domestic pigeons.

ORDER 7. GALLINÆ. Turkeys, Grouse, Pheasants.

Familiar representatives of this group are the domestic fowls and the turkeys. They are heavy bodied, short-winged birds, which are able to get up from the ground quickly and fly short distances rapidly. They spend most of the time on the ground and run swiftly.

I. Middle tail feathers not lengthened.

1. TETRAONIDÆ. GROUSE, QUAILS.

II. Middle tail feathers excessively lengthened.

2. PHASIANIDÆ. PHEASANTS.

ORDER 8. PALUDICOLÆ. Cranes, Rails, Coots, Gallinules.

These are the swamp-haunting birds. Only the Cranes can be called true waders, the others skulk about in the vegetation or swim in open water, some gleaning about on land. They feed largely upon swamp animal life.

I. Tarsus under 3 inches.

1. RALLIDÆ. RAILS, COOTS, GALLINULES.

II. Tarsus over 6 inches.

2. GRUIDÆ. CRANES.

ORDER 9. HERODIONES. Herons, Bitterns.

These are the true wading birds. The legs are long and slender and bare of feathers except at the upper end of the "drum stick," but the toes are not webbed. The tail feathers are soft and drooping. They stand in the water waiting quietly for the prey to approach within striking distance, but sometimes dash after it.

I. Bill straight, sharply pointed.

1. ARDEIDÆ. BITTERNS, HERONS.

II. Bill curved, blunt ended.

2. IBIDIDÆ. IBISES.

ORDER 10. LIMICOLÆ. Shore Birds.

While the birds comprising this group are called by some people waders most of them are much less truly such than the Herodiones. They frequent wet or at least moist situations a good deal, and subsist mostly upon animals. Few of them have anything approaching song, but some give pleasing calls.

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|---|--|
| I. Sides of toes with lobes. | 6. PHALAROPODIDÆ. PHALAROPES. |
| II. Sides of toes without lobes. | |
| A. Tarsus over 3.50 inches. | 3. RECURVISTRIDÆ. STILTS, AVOCETS. |
| B. Tarsus under 3.50 inches. | |
| 1. Scales on front of tarsus square, large, of one row. | 2. SCOLOPACIDÆ. SNIPES, SANDPIPERS, ETC. |
| a. Bill slender, blunt. | 4. APHRIZIDÆ. TURNSTONES, SURF BIRD. |
| b. Bill stout, sharp. | 1. CHARADRIIDÆ. PLOVERS. |
| 2. Scales on front of tarsus not square, small, numerous. | 5. HAEMATOPODIDÆ. OYSTERCATCHERS. |
| a. Bill shorter than tarsus. | |
| b. Bill longer than tarsus. | |

ORDER 11. LONGIPENNES. Gulls, Terns, Jaegers.

As the name implies, these birds have long wings, and are therefore strong fliers. The tail is well developed, the feet webbed, the nostrils open thru slits, and the legs are placed near the middle of the body so that the standing position is nearly horizontal. They live over the water mostly, either gleaning from its surface or diving into it for fish.

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|----------------------------------|-----------------------------|
| I. Middle tail feathers longest. | 1. STERCORARIIDÆ. JAEGERES. |
| II. Tail square or forked. | 2. LARIDÆ. GULLS AND TERNS. |
| A. Tail square or nearly so. | LARINÆ. GULLS. |
| B. Tail deeply forked. | STERNINÆ. TERNS. |

ORDER 12. ANSERES. Ducks, Geese, Swans.

The general characters of the duck group are too well known to make extended treatment necessary. All are game birds and therefore suffer much from gunners. None are harmful, unless it be the Geese occasionally, and many are beneficial. Of course all have webbed feet.

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|--|-----------------------------------|
| I. Lores bare. | 5. CYGNINÆ. SWANS. |
| II. Lores feathered. | |
| A. Bill long and slender, cylindrical. | 1. MERGINÆ. MERGANSERS. |
| B. Bill flattened and broadened. | |
| 1. Scales on front of tarsus rounded. | 4. ANSERINÆ. GEESE. |
| 2. Scales on front of tarsus square. | 3. FULIGULINÆ. SEA AND BAY DUCKS. |
| a. Hind toe with a flap or lobe. | 2. ANATINÆ. RIVER AND POND DUCKS. |
| b. Hind toe without a flap or lobe. | |

ORDER 13. STEGANOPODES. Cormorants, Pelicans, etc.

Any member of this group may be known at once by the foot, which has all four toes joined together by three webs. They are all strong fliers, but do not spend much time on the wing, preferring to sit quietly on a rock. Their food is largely fish.

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|---|----------------------------------|
| I. An enormous pouch below the long bill. | 2. PELECANIDÆ. PELICANS. |
| II. With a small pouch and moderate bill. | 1. PHALACROCORACIDÆ. CORMORANTS. |

ORDER 14. TUBINARES. Albatrosses, Shearwaters, Fulmars, Petrels.

Birds of this order belong strictly to the ocean. All have the nostrils opening thru distinct tubes. All are excellent fliers.

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| I. Length more than 30 inches. | 1. DIOMEDEIDÆ. ALBATROSSES. |
| II. Length under 25 inches. | 2. PROCELLARIIDÆ. PETRELS, SHEARWATERS. |

ORDER 15. PYGOPODES. Diving Birds.

Members of this order are duck-like birds in general appearance, but unlike many of the ducks, they do not rise from the water when alarmed, but dive into it instead. The bill is not flattened from above downwards and is not hooked, nor has it serrate margins.

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| I. With 3 toes. | 3. ALCIDÆ. AUKS, MURRES, PUFFINS, ETC. |
| II. With 4 toes. | 2. GAVIIDÆ. LOONS. |
| A. Toes with webs. | 1. PODICIPIDÆ. GREBES. |
| B. Toes with lobes. | |

KEY TO THE SPECIES.

ORDER I. PASSERES. Perching Birds.

Family 1. CORVIDAE. Ravens, Crows, Jays.

Most members of this family are well known birds. In point of intelligence they are easily superior, but they are more lacking in song than is any other group of Passeres. It has been stated that they have a sort of vocal language which may compensate for song. Some of the Jays are no mean mimics besides having songs of their own.

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|--|---|
| <p>I. Entirely black.</p> <p style="padding-left: 20px;">A. Wing about 17 inches long.</p> <p style="padding-left: 20px;">B. Wing about 16 inches.</p> <p style="padding-left: 20px;">C. Wing about 11.50 inches.</p> <p style="padding-left: 20px;">D. Wing about 10.50 inches.</p> <p>II. Conspicuously black and white. Tail long.</p> <p>III. With conspicuous blue.</p> <p style="padding-left: 20px;">A. Head conspicuously crested.</p> <p style="padding-left: 40px;">1. A white spot over the eye.</p> <p style="padding-left: 40px;">2. No white spot over the eye.</p> <p style="padding-left: 60px;">a. Blue of the forehead narrow.</p> <p style="padding-left: 80px;">(1). Back and breast sooty brown.</p> <p style="padding-left: 80px;">(2). Back and breast sooty slate.</p> <p style="padding-left: 60px;">b. Blue of forehead reaching onto crest.</p> <p style="padding-left: 20px;">B. Head not crested.</p> <p style="padding-left: 40px;">1. Back blue.</p> <p style="padding-left: 40px;">2. Back brown.</p> <p>IV. Plumage mostly gray.</p> <p style="padding-left: 20px;">A. Tips of secondaries and outer tail feathers white.</p> <p style="padding-left: 20px;">B. No white on secondaries and tail.</p> <p style="padding-left: 40px;">1. Top of head white.</p> <p style="padding-left: 40px;">2. Top of head black.</p> <p style="padding-left: 60px;">a. Back brown, smaller.</p> <p style="padding-left: 60px;">b. Back mouse-gray, larger.</p> | <p style="padding-left: 20px;">1. Northern Raven.</p> <p style="padding-left: 20px;">2. Mexican Raven.</p> <p style="padding-left: 20px;">3. Western Crow.</p> <p style="padding-left: 20px;">4. Northwest Crow.</p> <p style="padding-left: 20px;">7. American Magpie.</p>

<p>11. Black-headed Jay.</p>

<p style="padding-left: 20px;">9. Steller's Jay.</p> <p style="padding-left: 20px;">B. C. 1. Queen Charlotte Jay.</p> <p>10. Grinnell's Jay.</p>

<p style="padding-left: 20px;">6. Pinon Jay.</p> <p style="padding-left: 20px;">8. California Jay.</p>

<p style="padding-left: 20px;">5. Clark's Nutcracker.</p>

<p>12. White-headed Jay.</p>

<p style="padding-left: 20px;">13. Oregon Jay.</p> <p style="padding-left: 20px;">14. Gray Jay.</p> |
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Family 2. ICTERIDAE. Blackbirds, etc.

We call the birds composing this group Blackbirds because probably the most familiar examples are largely black. Some of its members have practically no song at all while others have pleasing and varied songs.

ADULT MALES.

- | | |
|---|---|
| <p>I. Plumage mostly or wholly black.</p> <p style="padding-left: 20px;">A. Head greenish black like the body.</p> <p style="padding-left: 20px;">B. Head violet purple, unlike the body.</p> <p style="padding-left: 20px;">C. Head coffee brown, unlike the back.</p> <p style="padding-left: 20px;">D. Head and neck yellow.</p> <p style="padding-left: 20px;">E. Head black.</p> <p style="padding-left: 40px;">1. Wing patches red, without buffy border.</p> <p style="padding-left: 40px;">2. Wing patches red, with buffy border.</p> <p style="padding-left: 60px;">a. Bill longer, more slender.</p> <p style="padding-left: 60px;">b. Bill shorter, stouter.</p> <p>II. With much orange in the plumage.</p> <p>III. Underparts black, back with white.</p> <p>IV. Underparts with yellow and a black crescent.</p> | <p style="padding-left: 20px;">B. C. 2. Rusty Blackbird.</p> <p style="padding-left: 20px;">16. Brewer's Blackbird.</p> <p style="padding-left: 20px;">15. Cowbird.</p> <p style="padding-left: 20px;">21. Yellow-headed Blackbird.</p>

<p>18. Californian Bicolored Blackbird.</p>

<p style="padding-left: 20px;">20. Northwestern Red-wing.</p> <p style="padding-left: 20px;">19. Columbian Red-wing.</p> <p style="padding-left: 20px;">17. Bullock's Oriole.</p> <p style="padding-left: 20px;">B. C. & H. 1. Bobolink.</p> <p style="padding-left: 20px;">22. Western Meadowlark.</p> |
|---|---|

ADULT FEMALES AND YOUNG.

I. Plumage much streaked.

- A. With much tawny yellow.
- B. Mostly buffy and rusty brown.
 - 1. Coloration darker.
 - 2. Coloration lighter.
- C. Light and dark gray.

B. C. & H. 1. Bobolink.

20. Northwestern Red-wing.

19. Columbian Red-wing.

15. Cowbird.

II. Little if any streaked.

- A. Underparts with yellow.
 - 1. Lower breast streaked with white.
 - 2. Without streaks.
- B. Nearly black, with rusty edgings.
- C. Slate gray, with rusty edgings.
- D. Grayish brown.

21. Yellow-headed Blackbird.

17. Bullock's Oriole.

18. Californian Bicolored Blackbird.

B. C. 2. Rusty Blackbird.

16. Brewer's Blackbird.

Family 3. FRINGILLIDAE. Sparrows, etc.

While many of the members of this family are typically sparrow-like, that is grayish brown with more or less streaking, some of them are of brilliant hues. All are sweet singers.

I. With conspicuous red.

- A. Mandibles crossed.
 - 1. Two conspicuous white wing bars.
 - 2. Without white wing bars.
- B. Mandibles not crossed.
 - 1. Head, neck, breast, and back red.
 - a. Length more than 8 inches.
 - b. Length 7 inches or less.
 - (1). Larger. Crimson of crown unlike that of back.
 - (2). Smaller. Crimson of crown like that of back.
 - 2. Red confined to breast and crown.
 - 3. Red confined to crown, rump, and throat.
 - 4. Red confined to posterior part of body.
 - a. Only the hind head gray.
 - b. Cheeks and hind head gray.

26. White-winged Crossbill.

25. American Crossbill.

24. Alaskan Pine Grosbeak..

33. Cassin's Purple Finch.

34. California Purple Finch.

B. C. & H. 2. Hoary Redpoll.

29. Redpoll.

27. Gray-crowned Leucosticte.

28. Hepburn's Leucosticte.

67. Lazuli Bunting.

II. Head, neck, and back blue.

III. With more or less conspicuous yellow.

- A. Mandibles crossed.
 - 1. Two white wing-bars.
 - 2. Without white wing-bars.
- B. Mandibles not crossed.
 - 1. Entire body yellow, or yellowish.
 - a. Bill enormous.
 - b. Bill moderate.
 - (1). Above yellowish olive green.
 - (2). Above yellow.
 - (a). Larger and lighter.
 - (b). Smaller and darker.
 - 2. Yellow confined to bend of wing and region of lores.
 - a. Yellow extending over the eye.
 - b. Yellow extending only to posterior of eye.
 - c. Yellow extending only to eye.
 - 3. Yellow confined to bend of wing.
 - 4. Yellow confined to the crown.
 - 5. Yellow confined to base of tail, inner wing feathers and outer border of primaries.

26. White-winged Crossbill.

25. American Crossbill.

23. Western Evening Grosbeak.

H. 26. Arkansas Goldfinch.

31. Western Goldfinch.

32. Willow Goldfinch.

41. Sandwich Sparrow.

42. Savanna Sparrow.

43. Western Savanna Sparrow.

B. C. & H. 5. Western Grasshopper Sparrow.

52. Golden-crowned Sparrow.

30. Pine Siskin.

IV. Whole head, neck, and throat dark gray or black.

- A. Side of body rufous.
 - 1. White tip of outer tail feather more than 1.3 inches long.
 - 2. White tip of outer tail feather less than 1.3 inches long.
 - 3. White tip of outer tail feather less than 1 inch long.

H. 31. Arctic Towhee.

65. Spurred Towhee.

66. Oregon Towhee.

- B. Sides washed with pinkish brown.
 - 1. Smaller, back reddish brown.
 - 2. Larger, back more grayish brown
- C. Sides gray.
- V. Head or throat with conspicuous black.
 - A. Forehead, throat and upper breast black, side of head with two white stripes enclosing black.
 - B. Crown, throat, and upper breast black.
 - 1. Outer tail feathers white at the end.
 - 2. Outer tail feathers without white.
 - a. A white spot in the wing.
 - b. No white spot in wing.
- VI. Crown and breast black, throat white.
- VII. Crown and side of head black, body cinnamon.
- VIII. Head conspicuously striped, with median line but without yellow.
 - A. Crown black and white or brown and white. No white on tail.
 - 1. Bend of wing yellowish.
 - 2. Bend of wing not yellowish.
 - B. Head variegated, black, white and chestnut. Tail tipped with white.
- IX. Head otherwise but still strongly marked.
 - A. Whole head and neck white.
 - B. Crown rufous.
 - 1. Remaining plumage chiefly white.
 - 2. Throat and belly white, back olive-green.
 - 3. Underparts grayish, back streaked.
 - a. Two conspicuous white bars on wing.
 - b. Wing without conspicuous bars.
- X. Plumage largely or chiefly streaked and without yellow on head.
 - A. Streaked practically all over in nearly uniform pattern.
 - 1. With concealed yellow on wings and tail.
 - 2. Without such yellow.
 - a. Streaks more distinct.
 - b. Streaks more blended.
 - B. Pattern of upperparts and underparts noticeably different.
 - 1. Not conspicuously streaked below.
 - a. Crown rufous.
 - (1). With two white wing-bars.
 - (2). Without such wing-bars.
 - b. Crown chiefly flaxen, head markings varied.
 - c. Merely streaked on head and upperparts.
 - 2. More or less spotted or streaked below.
 - a. Tail with white at least on outer rectrix.
 - (1). Throat white.
 - (2). Throat streaked.
 - (a). Upperparts grayish brown.
 - (b). Upperparts more buffy brown.
 - b. Tail without white.
 - (1). Feathers of tail pointed.
 - (2). Tail feathers not pointed.
 - (a). Tail redder brown than the back.
 - (a¹). The spots on the underparts gray.
 - (b¹). Spots on underparts brown.
 - (a²). Back indistinctly streaked.
 - (a³). Grayish brown.
 - (b³). Clear brown.
 - (b²). Upperparts unstreaked.
 - (a³). Upperparts brownish umber.
 - (b³). Upperparts rufous.
 - (c³). Upperparts umber brown.

47. Oregon Junco.
 48. Shufeldt's Junco.
 46. Slate-colored Junco.

44. Desert Sparrow.

37. Alaskan Longspur.

35. English Sparrow.
 B. C. & H. 4. Harris's Sparrow.
 B. C. & H. 3. McCown's Longspur.
 68. Black-headed Grosbeak.

54. Nuttall's Sparrow.
 53. Gambel's Sparrow.
 38. Western Lark Sparrow.

36. Snowflake.

36. Snowflake.
 64. Green-tailed Towhee.

49. Western Tree Sparrow.
 50. Western Chipping Sparrow.

30. Pine Siskin.

33. Cassin's Purple Finch.
 34. California Purple Finch.

49. Western Tree Sparrow.
 50. Western Chipping Sparrow.
 B. C. 3. Clay-colored Sparrow.
 51. Brewer's Sparrow.

45. Sage Sparrow.

39. Western Vesper Sparrow.
 40. Oregon Vesper Sparrow.

H. 27. Leconte's Sparrow.

63. Slate-colored Sparrow.

H. 29. Shumagin Fox Sparrow.
 60. Kadiak Fox Sparrow.

62. Sooty Fox Sparrow.
 61. Townsend's Sparrow.
 H. 30. Yakutat Fox Sparrow.

- (b). Tail the same color as the back.
 - (a¹). A broad buff band across the breast.
 - (b¹). Breast without a buff band.
 - (a²). Back distinctly streaked.
 - (a³). Darker and more uniform above.
 - (b³). Lighter and less uniform above.
 - (b²). Upperparts not distinctly streaked.
 - (a³). Back dark reddish brown.
 - (a⁴). Larger.
 - (b⁴). Smaller.
 - (b³). Sooty reddish brown.

59. Lincoln's Sparrow.

56. Merrill's Song Sparrow.
55. Mountain Song Sparrow.

57. Rusty Song Sparrow.
H. 28. Oregon Song Sparrow.
58. Sooty Song Sparrow.

Family 4. TANAGRIDAE. Tanagers.

The Tanagers are birds of brilliant plumage, but of indifferent song. The only representative which occurs within the limits of this treatment is the

69. Crimson-headed Tanager.

Family 5. MNIOTILTIDAE. Wood Warblers.

The birds comprising this large group are for the most part small and parti-colored birds, some of them possessing pleasing songs of considerable variety, but most of them being weak and indifferent singers. None of them really warble. Many possess brilliant plumage.

I. Underparts without streaks.

- A. Throat black, slaty, or dark gray.**
 - 1. Throat slaty, or dark gray.
 - 2. Throat black.
 - a. Head, neck, and back black.
 - b. Crown, cheeks, and neck yellow.
- B. Throat white or grayish white.**
 - 1. Side of body with yellow.
 - 2. Side of body without yellow.
- C. Throat yellow or yellowish.**
 - 1. Large, length more than 7 inches.
 - 2. Small, length less than 6 inches.
 - a. Two white wing bars. Belly not yellow.
 - b. Without white wing bars.
 - (1). Lower throat gray, belly bright yellow.
 - (2). Underparts nearly uniform yellow or yellowish.
 - (a). Forehead yellow, crown black or olive green.
 - (a¹). Smallest and brightest.
 - (b¹). Medium and dullest.
 - (c¹). Largest and medium coloration.
 - (b). Forehead and cheeks black.
 - (a¹). Larger, yellow more orange.
 - (b¹). Smaller, yellow more greenish.
 - (c). Forehead and crown olive green.
 - (a¹). A concealed orange crown patch.
 - (a²). Larger, duller.
 - (b²). Smaller, brighter.
 - (b¹). Without a concealed crown patch.
 - (d). Forehead and crown gray or brownish.
 - (a¹). A chestnut concealed crown patch.
 - (b¹). Without a concealed crown patch.
 - (a²). Crown grayish.
 - (b²). Crown brownish.

79. Tolmie's Warbler.

86. American Redstart.
78. Hermit Warbler.

86. American Redstart.
B. C. 4. Tennessee Warbler.

83. Western Chat.

78. Hermit Warbler.

79. Tolmie's Warbler.

85. Golden Warbler.
B. C. & H. 7. Wilson's Warbler.
84. Pileolated Warbler.

81. Western Yellow-throat.
82. Pacific Yellow-throat.

70. Orange-crowned Warbler.
71. Lutescent Warbler.
B. C. 4. Tennessee Warbler.

72. Calaveras Warbler.

72. Calaveras Warbler.
81 & 82. Yellow-throats.

II. Underparts with streaks.

- A. Streaks brown or chestnut.**
 - 1. Lighter.
 - 2. Darker.
- B. Streaks black or nearly so.**
 - 1. Throat black, or with some black.
 - a. Underparts white.
 - b. Underparts with yellow.
 - 2. Throat white. Crown, rump, and sides with yellow.
 - 3. Throat white, crown pure black.
 - 4. Throat yellowish, with streaks.
 - 5. Throat yellowish without streaks.
 - 6. Throat yellow, not streaked.
 - a. Middle of tail white.
 - b. White on outer part of the end of the tail.

73. Yellow Warbler.
B. C. & H. 6. Alaskan Yellow Warbler.

76. Black-throated Gray Warbler.
77. Townsend's Warbler.
74. Myrtle Warbler.
B. C. 6. Black-poll Warbler.
80. Grinnell's Water Thrush.
B. C. 6. Black-poll Warbler (female).

75. Audubon's Warbler.
B. C. 5. Magnolia Warbler.

Family 6. ALAUDIDAE. Larks.

These are the true larks. They are strictly birds of the open country perching upon relatively flat surfaces. They have the true lark habit of singing while mounting upward in the air, often to great heights.

I. Throat white.

87. Alaska Horned Lark.

II. Throat yellow.

A. Breast washed with yellow.

89. Pacific Horned Lark.

B. Breast without yellow.

88. Columbian Horned Lark.

Family 7. MOTACILLIDAE. Pipits.

Our Pipit resembles the Larks in general form and coloration, but may be readily distinguished by the nervous jerking of the tail, and by the white outer tail-feathers. Its note is very different.

90. American Pipit.

Family 8. TURDIDAE. Thrushes, etc.

To this family belong the familiar Robin and Bluebird. In point of song alone many members of it take first rank both in variety and beauty. Their proper setting is woods, where their colors harmonize with their surroundings, and where their songs belong.

I. With much blue.

A. Without reddish brown.

102. Mountain Bluebird.

B. With reddish brown.

1. Smaller, back with less reddish brown.

101. Western Bluebird.

2. Larger, back with more reddish brown.

H. 33. Chestnut-backed Bluebird.

II. Without blue.

A. Nearly uniform brownish gray.

91. Townsend's Solitaire.

B. Coloration never uniform.

1. Above slaty or slaty brown.

a. Throat black and white.

(1). Outer tail feathers tipped with white.

98. American Robin.

(2). Outer tail feathers without white.

99. Western Robin.

b. Throat rusty brown.

(1). Wing 47. Browner.

100. Varied Thrush.

(2). Wing 41. Paler and grayer.

H. 32. Pale Varied Thrush.

2. Upperparts olive or olive brown, tail not different.

a. Above olive without rufescent tinge.

94. Olive-backed Thrush.

b. Above with rufescent tinge.

93. Russet-backed Thrush.

3. Upperparts rufous brown, the tail brighter.

a. Wing 4. Colors palest.

B.C.&H. 8. Audubon's Hermit Thrush.

b. Wing 32. Richest brown.

97. Dwarf Hermit Thrush.

c. Wing 35. Color medium.

95. Alaska Hermit Thrush.

d. Wing 37. Medium pale coloration.

96. Sierra Hermit Thrush.

4. Upperparts uniform cinnamon brown.

92. Willow Thrush.

Family 9. SYLVIDAE. Kinglets, Gnatcatchers, etc.

These tiny birds are known as the Old World Warblers, where they are far more numerous in species than on this side of the water. They are restless, all the time flitting about searching for food.

I. Crown bordered by black streaks.

103. Western Golden-crowned Kinglet.

II. Crown without black.

A. Colors less bright.

104. Ruby-crowned Kinglet.

B. Colors brighter.

105. Sitkan Kinglet.

Family 10. PARIDAE. Titmice, Nuthatches.

Some members of this family are well known to everybody who sees. They are great acrobats, their proper setting of course being trees. All have striking calls and songs or song-calls. They nest chiefly in holes in trees.

I Tarsus nearly twice as long as the middle toe without the claw.

110. Bush-tit.

11. Tarsus much less than twice as long as middle toe without claw.

A. Chin and throat black.

1. Crown washed with brown.
 - a. Back and sides grayish rusty brown.
 - b. Back and sides rusty chestnut.

2. Crown pure black.

- a. A white line over the eye.
- b. No white line over the eye.
 - (1). Tail 2.7. Colors paler.
 - (2). Tail 2.5. Colors darker.
 - (3). Tail 2.3. Colors darker.

B. Chin and throat white or nearly so.

1. Side of head and neck white.
 - a. Wing 3.4; more purely white below.
 - b. Wing 3.7; less purely white below.
2. Side of head not entirely white.
 - a. A white line over the eye.
 - b. No white line over the eye.

B. C. 7. Columbian Chickadee.

109. Chestnut-backed Chickadee.

108. Mountain Chickadee.

B. C. & H. 9. Long-tailed Chickadee.

106. Chickadee.

107. Oregon Chickadee.

111. Slender-billed Nuthatch.

H. 34. Rocky Mountain Nuthatch.

112. Red-breasted Nuthatch.

113. Pygmy Nuthatch.

Family 11. CERTHIDAE. Creepers.

The stiffened tail feathers and lichen-like coloration of these birds easily distinguishes them. Their habit of clinging close to the bark and winding a spiral course upward is characteristic also.

I. Upperparts with much rusty brown.

H. 35. Rocky Mountain Creeper.

II. Upperparts yellowish rusty.

115. Tawny Creeper.

III. Upperparts dusky brown.

114. Sierra Creeper.

Family 12. TROGLODYTIDAE. Wrens, Thrashers, etc.

This is a somewhat composite group, with the mockingbird type on the one hand and the wrens on the other. It is not easy to discuss characteristics without exceeding the limits of space allotted here.

I. Length about 9 inches.

A. Color mostly slaty gray.

B. General coloration above brownish.

124. Catbird.

123. Sage Thrasher.

II. Length under 7 inches.

A. Back spotted with white.

1. Larger and lighter.

2. Smaller and darker.

B. Back spotted with black.

C. Back unspotted.

1. A distinct white line over the eye.

2. No white line over the eye.

a. Above rusty brown; throat white; belly brown.

b. Above light cinnamon; below brownish gray.

c. Above cinnamon; below pale cinnamon.

116. Western Marsh Wren.

117. Tule Wren.

121. Rock Wren.

118. Seattle Wren.

122. Canon Wren.

119. Western House Wren.

120. Western Winter Wren.

Family 13. CINCLIDAE. Water Ouzels.

These birds are to be found about white water along mountain streams. They seem as much at home in and beneath a current which breaks the water into drops as perched upon a stone above the water. Only one species belongs to our fauna and that is the

125. American Water Ouzel.

Family 14. HIRUNDINIDAE. Swallows, Martins.

The graceful flight of these birds is well known. Their habit of feeding upon flying insects makes them especially useful birds.

I. Without any metallic reflections.

A. Throat and breast brownish gray.

B. A brownish band across the white breast.

128. Rough-winged Swallow.

129. Bank Swallow.

II. Upperparts with metallic reflections.

A. Underparts steel blue.

B. Throat chestnut, rufous, or brownish.

1. Tail deeply forked.

2. Upper tail-coverts rufous or buffy.

C. Throat gray or white.

126. Purple Martin.

130. American Barn Swallow.

127. Cliff Swallow.

1. Throat and breast brownish gray.
2. Entire underparts white.
 - a. Above steel blue or steel green.
 - b. Above bronze-green.

126. Purple Martin.**131. Tree Swallow.****132. Violet-green Swallow.***Family 15. AMPELIDAE. Waxwings.*

The Waxwings are silent birds as to song, altho they have a faint conversational twitter. The delicacy of their plumage and the red wax-like tips of some of the wing feathers are characteristic features.

- I. Wing over 4.50.
- II. Wing under 4.00.

133. Bohemian Waxwing.**134. Cedar Waxwing.***Family 16. LANIIDAE. Shrikes.*

These are the raptorial birds among the Passeres.

- I. Underparts pure white.
- II. Underparts not pure white.
 - A. Wing more than 4 inches.
 - B. Wing 4 inches or less.

136. White-rumped Shrike.**135. Northern Shrike.****137. California Shrike.***Family 17. VIREONIDAE. Vireos.*

In some respects the Vireos resemble the last group, but their habit is to glean deliberately among the foliage or along the branches rather than dart out for insects that are flying. All of them have pleasing songs.

- I. Length more than 6 inches.
 - A. Sides of crown bordered by black.
 - B. Sides of crown without black
- II. Length less than 6 inches.
 - A. Two white wing bars.
 - B. No white wing bars.

138. Red-eyed Vireo.**140. Cassin's Vireo.****141. Anthony's Vireo.****139. Western Warbling Vireo.***Family 18. TYRANNIDAE. Flycatchers.*

The most distinctive thing about these birds is their habit of sitting quietly and alert on some perch from which they can command a fairly wide view, and from it launch out to catch a flying insect.

- I. Wing over 3 inches.
 - A. Tip of tail broadly white.
 - B. Tip of tail not broadly or not at all white.
 1. Underparts without yellow or yellowish.
 - a. Below uniform white.
 - b. Below black, only the belly white.
 2. Underparts with rusty brown.
 3. Underparts with yellow or yellowish.
 - a. Tail with rufous.
 - b. Tail without rufous.
 - (1). Belly bright yellow.
 - (2). Belly only yellowish.
 - (a). Length less than 7 inches.
 - (b). Length 7 or more.
 - II. Wing under 3 inches long.
 - A. Underparts distinctly yellow.
 - B. Underparts yellowish only.
 1. Above distinctly brownish.
 2. Above grayish olive, not brown.
 - a. Outer web of outer tail feather abruptly paler than inner web.
 - b. Outer web of outer tail feathers not abruptly paler than inner web.

142. Kingbird.**B. C. & H. 10. Gray Kingbird.****H. 36. Western Black Phoebe.****145. Say's Pewee.****144. Ash-throated Flycatcher.****143. Western Kingbird.****147. Western Wood Pewee.****146. Olive-sided Flycatcher.****148. Western Flycatcher.****149. Traill's Flycatcher.****151. Wright's Flycatcher.****150. Hammond's Flycatcher.**

ORDER 2. MACROCHIRES. Goatsuckers, Swifts, Hummingbirds.

Family 1. TROCHILIDAE. Hummingbirds.

- I. Middle tail feathers broader near end than at base. **155. Calliope Hummingbird.**
- II. Middle tail feathers narrower near end than at base.
 - A. Outer tail feathers not decidedly shorter than middle pair. **152. Black-chinned Hummingbird.**
 - B. Outer tail feathers decidedly shorter than middle pair.
 - 1. Back reddish brown. **153. Rufous Hummingbird.**
 - 2. Back green. **154. Allen's Hummingbird.**

Family 2. CAPRIMULGIDAE. Goatsuckers.

- I. Wing without a white patch. **156. Poor-will.**
- II. Wing with a white patch.
 - A. Coloration darker. **157. Pacific Nighthawk.**
 - B. Coloration lighter. **158. Western Nighthawk.**

Family 3. MICROPODIDAE. Swifts.

- I. Tail feathers ending in spines. **160. Vaux's Swift.**
- II. Tail feathers without spines.
 - A. Underparts without white. **159. Black Swift.**
 - B. Underparts with white. **161. White-throated Swift.**

ORDER 3. PICI. Woodpeckers.

Family. PICIDAE. Woodpeckers.

- I. With only 3 toes.
 - A. Back black without white. **169. Arctic Three-toed Woodpecker.**
 - B. Back black with white.
 - 1. Back distinctly barred. Smaller. **170. Alaskan Three-toed Woodpecker.**
 - 2. Back indistinctly or not barred. **B. C. 9. Alpine Three-toed Woodpecker.**
- II. With 4 toes.
 - A. Length about 17 inches. Head crested. **175. Northern Pileated Woodpecker.**
 - B. Length over 10 under 14 inches.
 - 1. Belly red, back black. **176. Lewis's Woodpecker.**
 - 2. Belly not red, back not black.
 - a. Lining of wings and tail yellow. **177. Yellow-shafted Flicker.**
 - b. Lining of wings and tail red.
 - (1). General coloration lighter. **178. Red-shafted Flicker.**
 - (2). General coloration darker. **179. Northwest Flicker.**
 - C. Length under 10 inches, over 8 inches.
 - 1. Whole head white. **168. White-headed Woodpecker.**
 - 2. Whole head red or reddish.
 - a. Colors duller. **172. Red-breasted Sapsucker.**
 - b. Colors brighter and deeper. **173. Northwest Sapsucker.**
 - 3. Red of head restricted to crown, throat and nape. **171. Red-naped Sapsucker.**
 - 4. Crown black or brownish.
 - a. Underparts with bright yellow. **174. Williamson's Sapsucker.**
 - b. Underparts without yellow.
 - (1). Middle of back barred and spotted with black. **B. C. 8. Queen Charlotte Woodpecker.**
 - (2). Middle of back white, unmarked.
 - (a). Underparts white. **162. Rocky Mountain Hairy Woodpecker.**
 - (b). Underparts dirty white. **163. Cabanis's Woodpecker.**
 - (c). Underparts dirty brownish. **164. Harris's Woodpecker.**
 - D. Length under 7 inches.
 - 1. Underparts smoky gray. **167. Gairdner's Woodpecker.**
 - 2. Underparts almost white. **165. Downy Woodpecker.**
 - 3. Underparts pure white, large. **166. Batchelder's Woodpecker.**

ORDER 4. COCCYGES. Cuckoos, Kingfishers.

Family 1. ALCEDINIDAE. Kingfishers.

The one representative of this family is

181. Belted Kingfisher.*Family 2. CUCULIDAE. Cuckoos.*

The only member of this family occurring is

180. California Cuckoo.

ORDER 5. RAPTORES. Vultures, Hawks, Eagles, Owls, etc.

Family 1. ALUCONIDAE. Barn Owls.

The only member of this family is

B. C. & H. 11. Barn Owl.*Family 2. STRIGIDAE. Owls.*

I. Head with conspicuous ear tufts.

A. Length about 10 inches.

1. Toes entirely naked.
2. Toes not entirely naked.
 - a. Upperparts sooty brown.
 - b. Upperparts buffy-gray.

191. Dwarf Screech Owl.**189. Kennicott's Screech Owl.****190. MacFarlane's Screech Owl.**

B. Length about 15 inches.

1. Ear tufts long.
2. Ear tufts short.

182. Long-eared Owl.**183. Short-eared Owl.**

C. Length about 22 inches.

1. Prevailing color dark sooty brownish.
2. Prevailing color tawny.
3. Prevailing color gray.
4. Prevailing color grayish white.

194. Dusky Horned Owl.**B. C. & H. 12. Great Horned Owl.****192. Western Horned Owl.****193. Arctic Horned Owl.**

II. Head without tufts.

A. Nearly pure white.

195. Snowy Owl.

B. Color never nearly white.

1. Length about 27 inches.
2. Length about 20 inches.
3. Length about 15 inches.
4. About 10 inches long.
 - a. Tarsi bare behind.
 - b. Tarsi not bare behind.

185. Great Gray Owl.**184. Northern Spotted Owl.****196. American Hawk Owl.**

5. Under 9 inches long.

- a. Head with streaks.
 - (1). Above cinnamon brown.
 - (2). Above nearly chestnut brown.
- b. Top of head spotted.
 - (1). Lighter.
 - (2). Darker.

197. Burrowing Owl.**186. Richardson's Owl.****187. Saw-whet Owl.****188. Northwest Saw-whet Owl.****198. Pygmy Owl.****199. California Pygmy Owl.***Family 3. FALCONIDAE. Hawks, Eagles, etc.*

I. Length over 30 inches.

- A. Tarsi completely feathered
- B. Tarsi not completely feathered.

209. Golden Eagle.**210. Bald Eagle.**

II. Length over 15 under 26 inches.

A. Length over 20 inches.

1. Top of head white.
2. Top of head not white.
 - a. Tarsi feathered to the toes.
 - (1). Upperparts, white, grayish, and dusky.
 - (2). Upperparts generally ferruginous.
 - b. Tarsi not wholly feathered.
 - (1). Rump white.
 - (2). Rump not white.
 - (a). General color of tail reddish brown.
 - (b). General color of tail pure white.
 - (c). General color of tail light gray.
 - (d). General color of tail dark gray.
 - (a1). Above bluish slate.
 - (b1). Above dark plumbeous.
 - (e). General color of tail gray-brown.

220. American Osprey.**207. American Rough-legged Hawk.****208. Ferruginous Rough-leg.****200. Marsh Hawk.****205. Western Red-tail.****B. C. & H. 14. White Gyrfalcon.****211. Gray Gyrfalcon.****203. American Goshawk.****204. Western Goshawk.****206. Swainson's Hawk.**

III. Length over 15 inches.

- A. Tail as long as the body.
- B. Tail much shorter than the body.
 - 1. Sides of throat black.
 - a. Top of head darker than back.
 - b. Top of head the same color as the back.
 - 2. Sides of throat not black.
 - a. Underparts rusty.
 - b. Underparts white with dark markings.

IV. Length under 15 inches.

- A. Tail as long as the body.
- B. Tail much shorter than the body.
 - 1. Upperparts reddish.
 - a. Larger, paler, streaks finer.
 - b. Smaller, darker, streaks coarser.
 - 2. Upperparts dark.
 - a. Tail crossed by 6 light bars.
 - b. Tail crossed by 5 light bars.
 - (1). Darker, nearly black above.
 - (2). Lighter, slaty blue or blackish brown.

Family 4. CATHARTIDÆ. Vultures.

I. Length about 45 inches.

II. Length about 30 inches.

202. Cooper's Hawk.

213. Peregrine Falcon.

214. Peale's Falcon.

B. C. & H. 13. Red-bellied Hawk.

212. Prairie Falcon.

201. Sharp-shinned Hawk.

219. Desert Sparrow Hawk.

218. Sparrow Hawk.

217. Richardson's Merlin.

216. Black Merlin.

215. Pigeon Hawk.

ORDER 6. COLUMBÆ. Doves and Pigeons.

I. A large white patch on the wing.

II. Wing without a white patch.

- A. Tail nearly square, crossed by a distinct band.
- B. Tail without a band.
 - 1. Length about 16 inches.
 - 2. Length about 12 inches.

225. White-winged Dove.

223. Band-tailed Pigeon.

H. 37. Passenger Pigeon.

224. Mourning Dove.

ORDER 7. GALLINÆ. Turkeys, Grouse, Pheasants.

Family 1. TETRAONIDÆ. Grouse, Quails.

I. Length about 29 inches.

II. Length less than 24, more than 12 inches.

- A. Lower part of tarsus naked.
 - 1. Upperparts rusty brown.
 - 2. Upperparts gray.
 - 3. Upperparts gray-brown.
- B. Legs feathered to the base of the toes.
 - 1. Tail of 16 feathers.
 - 2. Tail of 20 feathers.
 - a. Tail with a light terminal band.
 - b. Tail without a band.
- C. Toes feathered.
 - 1. Tail white.
 - 2. Tail black.
 - a. Bill stout, depth at base .40 or more.
 - b. Bill slender, depth at base less than .40.
- D. Middle tail feathers elongated, pointed.

III. Length less than 12 inches.

- A. Head without elongated feathers.
- B. A long, slender plume extending from occiput.
 - 1. Above deep olive-brown.
 - 2. Above grayish-olive.
- C. Fore crown with a long feather curving forward.
 - 1. Upperparts deep smoke-brown.
 - 2. Upperparts grayish-brown.

237. Sage Grouse.

234. Oregon Ruffed Grouse.

B. C. 10. Gray Ruffed Grouse.

233. Canadian Ruffed Grouse.

232. Franklin's Grouse.

231. Sooty Grouse.

B. C. & H. 15. Richardson's Grouse.

235. White-tailed Ptarmigan.

B. C. 11. Willow Ptarmigan.

B. C. 12. Rock Ptarmigan.

236. Columbian Sharp-tailed Grouse.

226. Bob-white.

227. Mountain Quail.

228. Plumed Quail.

229. California Quail.

230. Valley Quail.

Family 2. PHASIANIDÆ. Pheasants.

This family is represented by the birds imported in the interests of sportsmen.

238. Mongolian Pheasant.

ORDER 8. PALUDICOLÆ. Cranes, Rails, etc.

Family 1. RALLIDÆ. Rails, Coots, Gallinules.

These are marsh-loving birds, their home being among the vegetation characteristic of such places. They run among the sedges and grasses as readily and rapidly as a mouse. It is not easy to catch a glimpse of the Rails unless one is so fortunate as to find one sitting on its nest.

- | | |
|--|--------------------------------------|
| I. Prevailing color black or dark slate. | 243. American Coot. |
| II. Prevailing color otherwise. | |
| A. Length about 17 inches. | 239. California Clapper Rail. |
| B. Length less than 12 inches, more than 7. | |
| 1. Bill yellowish-white, less than an inch long. | 241. Sora Rail. |
| 2. Bill reddish, about an inch and a half long. | 240. Virginia Rail. |
| C. Length less than 6 inches. | 242. California Black Rail. |

Family 2. GRUIDÆ. Cranes.

These are birds of great size, comparatively. They are often mistaken for the Herons, and vice versa. They feed much more in the open than the Herons do, but also frequent marshy ground.

- | | |
|----------------------------|---------------------------------|
| I. Mostly pure white. | 244. Whooping Crane. |
| II. Brownish-gray. | |
| A. Length about 35 inches. | 245. Little Brown Crane. |
| B. Length about 44 inches. | 246. Sandhill Crane. |

ORDER 9. HERODIONES. Herons, Bitterns, Ibises.

Family 1. ARDEIDÆ. Herons, Bitterns.

The herons are slender birds more by reason of their long, slender legs and necks than because the body is particularly slender. They are birds which wade in swamps and other shallow water, subsisting largely upon the animal life peculiar to such habitats. They can stand for long periods so motionless that they seem a part of their surroundings.

- | | |
|--|--|
| I. Length about 45 inches. | |
| A. Upperparts bluish-gray; lighter. | 248. Great Blue Heron. |
| B. Upperparts bluish-slate-gray; darker. | 249. Fannin's Heron. |
| II. Length about 40 inches. Pure white. | 250. American Egret. |
| III. Length less than 35 inches. | |
| A. Pure white. | B. C. & H. 16. Snowy Heron. |
| B. Mottled and streaked with rusty and yellowish-brown. | 247. American Bittern. |
| C. Back and crown black, or gray brown, streaked with white. | 251. Black-crowned Night Heron. |
| D. Back green, washed with blue-gray. | H. 38. Green Heron. |

Family 2. IBIDIDÆ. Ibises.

But one member of this family known in the Pacific Northwest.

- B. C. & H. 17. White-faced Glossy Ibis.**

ORDER 10. LIMICOLÆ. Shore Birds.

Family 1. CHARADRIIDÆ. Plovers.

These are short billed gleaning birds, many of which feed in the fields rather than along the margins of bodies of water. During their migrations they more often frequent the shores where they glean among the wash thrown up by the waves. Many have pleasing calls.

- | | |
|---|-------------------------------------|
| I. Underparts mostly black. | |
| A. Above conspicuously spotted with yellow. | 253. American Golden Plover. |
| B. Above black and white, without yellow. | 252. Black-bellied Plover. |
| II. Underparts not mostly black. | |
| A. Breast crossed by two black bands. | 254. Killdeer. |
| B. Breast crossed by one black band. | 255. Semipalmated Plover. |
| C. Breast without a black band crossing it. | |
| 1. Length about 6.5 inches. | 256. Snowy Plover. |
| 2. Length about 10.5 inches. | |
| a. Hind toe present. | 252. Black-bellied Plover. |
| b. Hind toe absent. | 253. American Golden Plover. |

Family 2. SCOLOPACIDAE. Sandpipers,

To this family belong the majority of our Shore Birds. They are mud probers, hence they have long bills which are soft and sensitive at the end. Most of them are found in wet or damp places. Many of them migrate in flocks, the flock flying as one bird.

I. Bill over 2 inches long.

A. Bill over 5 inches long.

B. Bill under 4.5.

1. Bill curved downward.

2. Bill straight or curved upward.

a. Bill over 3.00.

b. Bill under 3.00.

(1). Bill widened and pitted at the tip.

(a). Duller, bill averaging 2.30.

(b). Brighter, bill averaging 2.80.

(2). Bill not widened at the tip.

(a). Wing over 7.50.

(a¹). Axillars barred.

(b¹). Axillars not barred.

(b). Wing under 6.00.

II. Bill under 2 inches long.

A. Toes 3.

B. Toes 4.

1. Tail feathers pointed.

2. Tail feathers not pointed.

a. Tail barred.

(1). Wing under 4.50.

(2). Wing over 5.00.

(a). Wing over 6.00.

(a¹). Tail feathers showing much white.

(b¹). Tail feathers without white.

(b). Wing under 5.50.

(a¹). Upperparts not spotted.

(b¹). Upperparts spotted.

(a²). Upperparts spotted with white.

(b²). Upperparts spotted with buffy.

b. Tail not barred.

(1). Bill over 1.10.

(a). Wing over 6.50.

(a¹). Rump white.

(b¹). Rump not white.

(b). Wing under 5.75.

(a¹). Tarsus over 1.50.

(b¹). Tarsus under 1.50.

(a²). Belly with a black patch.

(b²). Belly without black.

(2). Bill under 1.00.

(a). Wing over 4.50.

(b). Wing under 4.00.

(a¹). Toes not at all webbed.

(b¹). Toes partly webbed.

(a²). Bill about 1 inch long.

(b²). Bill distinctly less than 1 inch long.

277. Long-billed Curlew.

278. Hudsonian Curlew.

268. Marbled Godwit.

H. 39. Dowitcher.

258. Long-billed Dowitcher.

269. Greater Yellow-legs.

272. Western Willet.

257. Wilson's Snipe.

267. Sanderling.

260. Sharp-tailed Sandpiper.

276. Spotted Sandpiper.

270. Lesser Yellow-legs.

274. Bartramian Sandpiper.

275. Buff-breasted Sandpiper.

B. C. & H. 19. Solitary Sandpiper.

271. Western Solitary Sandpiper.

259. Knot.

273. Wandering Tattler.

B. C. & H. 18. Stilt Sandpiper.

264. Red-backed Sandpiper.

261. Pectoral Sandpiper.

262. Baird's Sandpiper.

263. Least Sandpiper.

266. Western Sandpiper.

265. Semipalmated Sandpiper.

Family 3. RECURVIROSTRIDAE. Stilts and Avocets.

The long and extremely slender legs, and the long, slender, and distinctly upward curved bill sufficiently characterize this family.

I. Head and neck rufous or whitish.

279. American Avocet.

II. Head and neck black or brown.

H. 40. Black-necked Stilt.

Family 4. APHRIZIDAE. Turnstones.

The Turnstones are so called because of their habit of overturning small flat stones in search of insects and crustaceans which hide beneath. They are stout billed and stout bodied birds which frequent water margins.

I. Tail emarginate.

280. Surf Bird.

II. Tail slightly rounded.

281. Ruddy Turnstone.

III. Anterior half of the bird black or dark brown.

282. Black Turnstone.

Family 5. HAEMATOPODIDAE. Oystercatchers.

The only member of this family which is represented in the State is

283. Black Oystercatcher.

Family 6. PHALAROPODIDAE. Phalaropes.

Birds of this group are readily distinguished by the lobate toes. It indicates their habit of spending much time on open water swimming readily. Most of them are strikingly colored birds.

I. Bill heavy, wider than deep.

284. Red Phalarope.

II. Bill slender.

A. Smaller, less than 8 inches long.

285. Northern Phalarope.

B. Larger, more than 9 inches long.

286. Wilson's Phalarope.

ORDER 11. LONGIPENNES. Gulls, Terns, Jaegers.*Family 1. STERCORARIIDAE. Jaegers.*

These are the birds of prey among the gull-like birds. Their bill is strongly hooked, and the birds are possessed of great powers of flight. They steal the catch from the gulls.

I. Lengthened middle tail feathers broad and rounded.

287. Pomarine Jaeger.

II. Lengthened middle tail feathers pointed.

A. Length about 17 inches.

288. Parasitic Jaeger.

B. Length about 21 inches.

B. C. & H. 20. Long-tailed Jaeger.

*Family 2. LARIDAE. Gulls and Terns.**Subfamily. LARINAE. Gulls.*

The Gulls differ from the Terns in having a square tail and in carrying the head in a line with the body, the bill pointing forward. They are great scavengers, none being in the least harmful.

I. Length usually over 21 inches.

A. Larger, back pearl-gray, primaries without black.

B. C. & H. 21. Glaucous Gull.

1. Largest, palest, wings broadly white on tip.

2. Medium, wing chiefly gray on tip.

a. Second primary narrowly tipped with white.

290. Glaucous-winged Gull.

b. Second primary gray to tip.

H. 41. Nelson's Gull.

B. Smaller, back deep pearl gray to plumbeous, wing with black on tip.

1. Black of wing more restricted, mantle plumbeous slate.

291. Western Gull.

2. Mantle lighter, black of wing more extended.

a. Smaller, feet yellowish.

294. California Gull.

b. Larger, feet flesh-colored.

(1). Mantle deep pearl-gray.

292. Herring Gull.

(2). Mantle plumbeous gray.

293. Vega Gull.

II. Length under 21 inches.

A. Entirely pure white.

B. C. & H. 22. Ivory Gull.

B. Entire body slaty or sooty black, head and neck white in summer.

297. Heermann's Gull.

C. Back pearl-gray or brownish; underparts white or lighter.

1. Tail slightly forked.

299. Sabine's Gull.

2. Tail square.

a. Bill light, a black band across it.

295. Ring-billed Gull.

b. Bill light, a red spot near its tip.

294. California Gull.

c. Bill without a black band or red spot.

(1). Hind toe scarcely more than a knob.

289. Pacific Kittiwake.

(2). Hind toe short but well developed.

(a). Length more than 16 inches.

(a'). Gray wedge on inner web of third quill terminated with white.

296. Short-billed Gull.

(b'). Wedge not terminated with white.

H. 42. Mew Gull.

(b). Length about 14 inches.

298. Bonaparte's Gull.

Subfamily. STERNINAE. Terns.

All of the Terns treated here have forked tails. They usually carry the head at a sharp angle to the line of the body, thus having something of the appearance of a huge mosquito. All are beneficial.

I. Length about 21 inches.

H. 44. Caspian Tern.

II. Length about 10 inches.

303. Black Tern.

III. Length about 15 inches.

H. 43. Gull-billed Tern.

A. Tail forked for only 1.5 inches.

302. Arctic Tern.

B. Tail forked for more than 3 inches.

300. Forster's Tern.

1. Entire bill coral red.

301. Common Tern.

2. Bill blackish at tip.

a. Inner web of outer tail feather dusky.

b. Outer web of outer tail feather dusky.

ORDER 12. ANSERES. Ducks, Geese, Swans.

There is but a single family within this order, the ANATIDAE, but the group is divided into five sub-families, as follows:

Subfamily 1. MERGINAE. Mergansers, Fish Ducks,

These are known by the slender cylindrical bill. The two larger species eat fish almost wholly and so are not good to eat. The Hooded eats a good deal of other food, and its flesh is more savory.

I. Length under 18 inches; a conspicuous hood.

306. Hooded Merganser.

II. Length over 21 inches.

A. Head and throat black.

1. Underparts white, tinged with salmon.

304. American Merganser.

2. Breast brownish, heavily streaked with black.

305. Red-breasted Merganser.

B. Head and sides of neck rufous-brown.

304. American Merganser.

C. Head and sides of neck grayish brown.

305. Red-breasted Merganser.

Subfamily 2. ANATINAE. River and Pond Ducks,

These birds are popularly known as "tip-ups," from their habit of feeding in shallow water and tipping the head down beneath the water while the tail sticks straight up in the air. Their food is largely vegetation, and their flesh therefore savory.

I. Length under 17 inches.

310. Green-winged Teal.

A. Lesser wing coverts green.

B. Lesser wing coverts blue.

1. Prevailing color reddish brown.

312. Cinnamon Teal.

2. Prevailing color pattern mottled.

a. A white crescent in front of the eye.

311. Blue-winged Teal.

b. Underparts suffused with rusty brown.

312. Cinnamon Teal.

c. Underparts suffused with rusty gray.

311. Blue-winged Teal.

II. Length over 18 inches.

A. Belly not conspicuously streaked or spotted.

1. Head shining green.

307. Mallard.

2. Center of crown white or whitish.

a. Side of head and neck reddish brown.

B. C. & H. 23. European Widgeon.

b. Side of head and neck light, mottled.

309. American Widgeon.

3. Crown greenish, throat white.

315. Wood Duck.

4. Crown dark olive brown.

314. Pintail.

5. Crown finely streaked with black.

308. Gadwall.

a. Wing coverts with chestnut.

b. Wing coverts without chestnut.

(1). Sides barred with black.

314. Pintail.

(2). Sides plain brown.

309. American Widgeon.

(3). Sides spotted with black.

308. Gadwall.

B. Belly conspicuously marked or chestnut.

1. Underparts chestnut.

313. Shoveller.

2. Underparts not chestnut.

313. Shoveller.

a. Lesser wing coverts bluish.

b. Lesser wing coverts brownish gray.

(1). Speculum purple.

307. Mallard.

(2). Speculum gray and white.

308. Gadwall.

Subfamily 3. FULIGULINAE. Sea and Bay Ducks.

These ducks are great divers. They have been found in twenty fathoms of water, having become entangled in fish nets set at that depth. While they undoubtedly eat more fish than the last group their flesh is much used for food, and several of the species are great game birds. Theoretically they frequent deeper water than the birds of the last group, but practically the two groups intermingle freely.

I. Whole head and neck black.

A. Plumage entirely black.

327. American Scoter.

B. Plumage not entirely black.

1. Bill with a bluish band near its tip.

320. Ring-necked Duck.

2. Bill plain bluish.

a. Back of head with purplish reflections.

319. Lesser Scaup Duck.

b. Back of head with greenish reflections.

318. Greater Scaup Duck.

II. Head and neck rufous or rufous-brown.

A. Head and neck bright rufous.

1. Bill under 2 inches long.

316. Redhead.

2. Bill over 2.

317. Canvasback.

B. Head and neck rufous-brown.

1. Wing with a white patch.

a. Region at base of bill not white.

b. Region at base of bill white.

(1). Wing over 8.25 inches long.

321 & 322. American and Barrow's Golden-eye.

(2). Wing under 8.25 inches long.

318. American Scaup Duck.

2. No white in wing.

a. Bill over 2.00.

317. Canvasback.

b. Bill under 2.00.

(1). Wing over 8.00.

316. Redhead.

(2). Wing under 8.00.

320. Ring-necked Duck.

c. Middle tail feathers long and slender

324. Old-Squaw.

III. Head and throat steel blue or steel green.

A. Steel blue.

322. Barrow's Golden-eye.

B. Steel green.

321. American Golden-eye.

IV. Head and neck otherwise.

A. Wing over 10.

1. Neck and upper back mostly white.

326. Pacific Eider.

2. The plumage mostly black

a. Speculum white.

328. White-winged Scoter.

b. Speculum not white.

329. Surf Scoter.

B. Wing under 8.

1. Plumage much variegated in bold pattern.

325. Harlequin Duck.

2. Plumage nearly uniform or black and white.

a. Tail feathers stiff and slender. Color reddish.

330. Ruddy Duck.

b. Tail feathers normal. Color black and white.

323. Buffle-head.

Subfamily 4. ANSERINAE. Geese.

The Geese feed mostly upon land and therefore their food is largely vegetable. They are too well known to require comment.

I. Prevailing color white.

A. Length more than 22 inches.

331. Lesser Snow Goose.

B. Length less than 22 inches.

B. C. & H. 24. Ross's Snow Goose.

II. Prevailing color not white.

A. Head and neck chiefly black.

1. Black of lower neck separated from gray of underparts by lighter or white half-collar.

a. Lighter, pectoral half-collar not pure white.

333. Canada Goose.

(1). Length about 3 feet.

334. Hutchins's Goose.

(2). Length about 30 inches.

b. Darker, pectoral half-collar pure white.

335. White-cheeked Goose.

(1). Length about 3 feet.

336. Cackling Goose.

(2). Length about 2 feet.

2. Black of lower neck not so separated from gray of underparts.

a. Breast abruptly ashy gray.

B. C. 13. White-bellied Brant.

b. Breast black continuous with neck.

337. Black Brant.

B. Head and neck not black.

1. Rump white.

332. American White-fronted Goose.

2. Rump not white.

a. Color pattern giving a scaly appearance.

B. C. & H. 25. Emperor Goose.

b. Color pattern prevailing rusty brown.

338. Fulvous Tree Duck.*Subfamily 5. CYGNINAE. Swans.*

Everybody knows the swans, at least from park specimens.

I. Length about 55 inches.

339. Whistling Swan.

II. Length about 65 inches.

340. Trumpeter Swan.**ORDER 13. STEGANOPODES. Cormorants, Pelicans, etc.***Family 1. PHALACROCORACIDAE. Cormorants.*

The Cormorants are popularly known as "Shags" from their habit of standing nearly erect along the crest of a rock ridge, thus making it present a more roughened outline than normal. They are all dark birds, with lengthened outlines. Most of them belong to the rocky outlying islets along the coast, where they nest in rookeries.

I. Back brownish or greenish-brown, the feathers with black margins.

A. Prevailing color greenish-black.

341. White-crested Cormorant.

B. Head and neck glossy blue-black.

342. Brandt's Cormorant.

II. Feathers of the back not margined.

A. Bill stout, wing about 11 inches.

343. Violet-green Cormorant.

B. Bill slender, wing about 9.5 inches.

344. Baird's Cormorant.*Family 2. PELECANIDAE. Pelicans.*

Members of this family have excessively lengthened bills to the underside of which a huge throat pouch is attached. The birds assume grotesque attitudes. They could not be mistaken for any other birds.

I. Pure white, the primaries only black.

345. American White Pelican.

II. Prevailing color brownish gray.

346. California Brown Pelican.**ORDER 14. TUBINARES. Albatrosses, Shearwaters, Petrels.***Family 1. DIOMEDEIDAE. Albatrosses.*

To this group belong the largest of the strictly sea birds. Their proper habitat is the open sea far from land, except when breeding. They nest on out-of-the-way islands in such numbers as to completely cover the ground. Their great powers of flight are well known.

I. Prevailing color sooty brown.

347. Black-footed Albatross.

II. Prevailing color white.

A. Length about 49 inches. Remiges blackish.

H. 45. Wandering Albatross.

B. Length about 36 inches. Head straw-color.

348. Short-tailed Albatross.*Family 2. PROCELLARIIDAE. Shearwaters, Petrels.*

Members of this family frequent the open sea, flying easily just above the wave crests, or resting securely upon the ocean surface. They are more often seen near the coasts than the Albatrosses.

I. Length less than 10 inches.

A. Upperparts bluish-gray. Length about 8 inches.

353. Fork-tailed Petrel.

B. Upperparts brownish-black. Length about 6.

354. Kaeding's Petrel.

II. Length more than 10 inches.

A. Entirely dark gray or blackish-gray.

1. Length more than 15 inches.

a. Nasal tubes light.

349. Pacific Fulmar.

b. Nasal tubes dark.

351. Dark-bodied Shearwater.

2. Length less than 15 inches.

352. Slender-billed Shearwater.

B. Underparts white.

1. Crown and nape dusky black, sides grayish.
2. Whole head white.
 - a. Back with white feathers.
 - b. Back without white feathers.
 - (1). Primaries black, white on inner web.
 - (2). Primaries slate-gray, without white.

350. Black-vented Shearwater.

H. 46. Rodgers's Fulmar.

H. 47. Slender-billed Fulmar.

349. Pacific Fulmar.

ORDER 15. PYGOPODES. Grebes, Loons, Auks, Murres, etc.

Family 1. PODICIPIDAE. Grebes.

These are diving birds par excellence. They have no tails, their wings are short, and their bills are straight, slender and sharp. They pursue fish under water. When danger threatens they can remain submerged with only the bill protruding above the surface for indefinite periods.

I. Length about 26 inches.

355. Western Grebe.

II. Length about 19 inches.

356. Holboell's Grebe.

III. Length about 13 inches.

A. Bill light, with a black band near the middle.

359. Pied-billed Grebe.

B. Bill entirely dark.

1. Whole neck black.
2. Fore-neck bright rufous.
3. Grayish-black above.
4. Grayish-brown above.

358. American Eared Grebe.

357. Horned Grebe.

357. Horned Grebe (winter).

358. American Eared Grebe (winter).

Family 2. CAVIIDAE. Loons.

Like the Grebes, the Loons are diving birds, but unlike the Grebes the Loons possess a short tail. They are large, strong birds, and fly well when once well started a-wing. They dive extremely well, and swim long distances under water. Their swiftness of movement under water is such that no fish might hope to escape them.

I. Length about 32 inches.

360. Loon.

II. Length less than 28 inches.

A. Foreneck chestnut.

363. Red-throated Loon.

B. Foreneck black.

1. Larger; crown and nape darker gray.
2. Smaller; crown and nape light gray.

361. Black-throated Loon.

362. Pacific Loon.

Family 3. ALCIDAE. Auks, Murres, Puffins, etc.

Members of this family have thick necks, short bodies, and present in general a compact appearance. They have evident tails and short wings, but fly readily. Many nest on high rocky cliffs or ledges, some burrow into banks or among loose rocks, or occupy small clefts or grottoes in rocks. Most of them lay but a single egg a season.

I. Length about 17 inches.

372. California Murre.

II. Length less than 16 inches.

A. Body and wings and tail uniform sooty black.

364. Tufted Puffin.

B. Entire plumage with wavy bars of two shades of gray.

370. Marbled Murrelet.

C. Belly white.

1. Whole breast and belly white.

a. Top of head and neck black.

(a¹). Throat white.

370. Marbled Murrelet (winter).

(b¹). Throat gray.

369. Ancient Murrelet.

b. Top of head gray.

(1). Whole side of head white.

(2). Side of head gray like the crown.

B. C. 14. Horned Puffin.

367. Paroquet Auklet.

c. Upperparts varied, black and white.

371. Pigeon Guillemot (winter).

2. Throat and breast gray.

a. Length about 15 inches.

365. Rhinoceros Auklet.

b. Length about 9 inches.

366. Cassin's Auklet.

c. Length about 7 inches.

368. Least Auklet.

D. Black; a large white wing patch.

371. Pigeon Guillemot.

British Columbia Supplement

AND

Washington Hypothetical List

BRITISH COLUMBIA SUPPLEMENT.

WITH ANNOTATIONS BY ALLAN BROOKS.

Faunally speaking, the situation in the southwestern part of British Columbia is practically identical with that in northwestern Washington. A bird occurring upon either side of the line is almost sure to be found upon the other, and it is as impossible, as unnecessary, to draw distinctions between these regions. All that has been said in the foregoing pages, therefore, of bird-life in western Washington is equally applicable to the Fraser delta country and to the eastern end of Vancouver island. So far as the environs of our two chief cities are concerned we should need no "British Columbia Supplement." A strong similarity exists also between the fauna of eastern Washington and our own "dry belt," inasmuch that we have recently added to our British Columbia list, chiefly through the commendable activities of Mr. Chas. de Blois Green, some of the most characteristic species of the Arid Transition zone, such as Williamson's Sapsucker, the White-throated Swift, the Canyon Wren and the Sage Thrasher, formerly supposed not to range north of the Forty-ninth Parallel. But our mountainous hinterland does afford characteristic differences; and these, while still remote from most of us in experience, are nevertheless of interest to us as residents of British Columbia. The northern portion of the Province begins to assume a sub-arctic faunal complexion, especially in winter; while the ornithology of our eastern mountain system not only has specialized forms of its own but is tinged strongly by the residue of those tidal waves of migration which, sweeping across the central prairies in a northwesterly direction, break upon the eastern slopes of the Rockies and spill over into the quieter valleys of the interior. A brief account of these peculiar birds is added, with the assurance that thereby we are formally completing the list of British Columbia birds, and that we shall be able to obtain within the pages of this work information relative to all the birds known to occur in our Province.

DIVISION A.

EXCEPTIONS.

Of the 372 species described in the foregoing pages, the following have not yet been reported as occurring in British Columbia.^a

Mexican Raven, *Corvus corax sinuatus*.
California Jay, *Aphelocoma californica*.
Grinnell's Jay, *Cyanocitta stelleri carbonacea*.
Californian Bicolored Blackbird, *Agelaius gubernator californicus*.
Desert Sparrow, *Amphispiza bilineata deserticola*.
Sage Sparrow, *Amphispiza nevadensis*.
Green-tailed Towhee, *Oreospiza chlorura*.
Sierra Hermit Thrush, *Hylocichla guttata sequoiensis*.
California Shrike, *Lanius ludovicianus gambeli*.
Ash-throated Flycatcher, *Myiarchus cinerascens*.
Dwarf Screech Owl, *Otus flammeola idahoensis*.
Ferruginous Rough-leg, *Archibuteo ferrugineus*.
White-winged Dove, *Melopelia asiatica*.
Bob-white, *Colinus virginianus*.
California Clapper Rail, *Rallus obsoletus*.
California Black Rail, *Creciscus coturniculus*.
Whooping Crane, *Grus americana*.
American Egret, *Herodias egretta*.
Black-crowned Night Heron, *Nycticorax nycticorax uacsius*.
Snowy Plover, *Aegialitis nivosa*.
Forster's Tern, *Sterna forsteri*.
Pacific Eider, *Somateria v-nigra*.
Paroquet Auklet, *Phaleris psittacula*.
Least Auklet, *Aethia pusilla*.

a. No mention is made here of certain recently elaborated subspecies, such as *Passerella iliaca fuliginosa*, *Regulus calendula grinnelli*, etc., which are believed to occur in the Province, even though they have not yet been discriminated from inclusive or related forms in lists previously published.

DIVISION B.

Description of species known to occur in British Columbia but presumed not to occur in Washington.

B. C. No. 1.

QUEEN CHARLOTTE JAY.

A. O. U. No. 478 d. **Cyanocitta stelleri carlottae**. Osgood.

Synonym.—Osgood's JAY.

Description.—"Similar to *C. s. stelleri*, [q. v. p. 33] but larger and decidedly darker, the blue of a more violet hue, the back and the foreneck slightly sooty slate-black (decidedly less brown than in *C. s. stelleri*)" (Ridgway).

General Range.—Queen Charlotte Islands, B. C.; also southern portion (at least) of Prince of Wales Island (Howkan).

B. C. No. 2.

RUSTY BLACKBIRD

A. O. U. No. 509. **Euphagus carolinus** (Mull.).

Synonyms.—RUSTY GRACKLE. THRUSH BLACKBIRD.

Description.—*Adult male in breeding plumage:* Uniform glossy black, with bluish green reflections; iris pale straw. At other seasons the plumage bears rufous or "rusty" tips above, especially anteriorly, and rufescent or buffy tips below, in varying proportions; a light line also over the eye. *Adult female in breeding plumage:* Blackish slate, lustrous above, duller below. At other seasons the general cast of plumage is lighter, and the overlay of rusty or buffy is similar to that of the male. Adult male, length 9.00-9.60; wing 4.40; tail 3.68; bill .75. Female smaller.

Nesting.—*Nest:* of sticks and coarse grasses held together with mud, lined with fine grasses and rootlets, placed in bushes or high in coniferous trees. *Eggs:* 4-7, grayish or pale green, speckled and mottled with purples or reddish browns, and without streaks or lines. Av. size, 1.00 x .70.

General Range.—Eastern and northern North America, west to Alaska and the Plains. Breeds from northern United States northward. Winters from Kentucky and Tennessee southward.

Occurrence in British Columbia.—Casual. One specimen taken at Metlakatla, Nov. 29, 1901, by Rev. J. H. Keene and presented by him to the Provincial Museum.

B. C. No. 3.

CLAY-COLORED SPARROW.

A. O. U. No. 561. **Spizella pallida** (Swains.).

Description.—Above chiefly flaxen or clay-colored streaked distinctly with black; hind-neck more ashy; rump brownish gray; a pale median stripe; a whitish superciliary; lores and auriculars brownish; a dark postocular stripe and another from angle of mouth bounding the brown; below this a dusky maxillary streak; underparts soiled whitish. Length about 5.25; wing 2.40; tail 2.35; bill .37.

Nesting.—Much as in *S. breweri*.

General Range.—The Great Plains north to the Saskatchewan, west to the Rocky Mountains and casually further; south in winter to Texas and Mexico.

Occurrence in British Columbia.—Two singing males were taken by the writer on Carpenter's Mountain near 158-Mile House, Cariboo, July 3rd, 1901. No others were seen and it did not appear probable that these were strictly resident or breeding birds but rather belated wanderers or scouts. The specimens were wrongly reported at first under the name *S. breweri*, material for comparison not being at hand.

B. C. No. 4.

TENNESSEE WARBLER.

A. O. U. No. 647. *Helminthophila peregrina* (Wils.).

Description.—*Adult male*: Crown and sides of head bluish ash fading into whitish of throat; above bright olive-green; wings and tail dusky with faint edgings of olive-green; outer tail-feathers sometimes show obscure whitish spot near tips; upper eyelid, or faint superciliary line, whitish; below dull white, often washed more or less on throat, breast and sides (especially the last) with sordid yellowish. *Adult female*: Similar; ashy of head veiled by olive-green skirtings; more yellow below. *Immature*: Crown and back clear olive-green; underparts washed with yellow, except on under tail-coverts. Length 4.50-5.00; wing 2.53; tail 1.65; bill .40.

General Range.—Chiefly Eastern North America but also west to Rocky Mts. and beyond (northerly), breeding from northern tier of states north to high latitudes; south in winter to eastern Mexico, Central America and United States of Colombia.

Occurrence in British Columbia.—In the season of 1901 I found this species unexpectedly common in the vicinity of 158-Mile House in the Cariboo district. The birds made their first appearance on the 22nd of May and became common the same day. From that time on I heard their song in almost every clump of trees. A great number of them drew off to northward but a good many remained. They generally frequented the clumps of aspen trees and Murray pines where the ground was covered with a thick growth of dry pine-grass.

As I saw no females nor evidence of nesting I gave the birds three weeks and started out to look for their nests on the 15th day of June. Luckily I soon found a female off her nest, and after an hour's watching, during which I suffered torments from the mosquitoes, she at last dropped down to the nest.

Examination disclosed four eggs of a creamy white color finely speckled all over the surface with reddish-brown and with some larger spots of the same color. There were also some spots of light lilac but these were not conspicuous.

On the same day two more nests with newly-hatched young were found and several more, also with young, were encountered the week following.

The nests were always on the ground, sometimes at the foot of a small service-berry bush or twig. They were all arched over by the dry pine-grass of the preceding year; this year's growth having just commenced. The nest is small even for a warbler, shallow and of loose construction. It is composed externally of a few dead leaves, a little moss and a good deal of fine grass with a lining exclusively of the last-named material.

B. C. No. 5.

MAGNOLIA WARBLER.

A. O. U. No. 657. *Dendroica magnolia* (Wils.).

Synonym.—BLACK-AND-YELLOW WARBLER.

Description.—*Adult male in spring*: Crown and nape slaty blue; back deep black; black bands on the sides of the head meeting in front and connecting with black of back; superciliary line, cut off by black in front of eye, white; a white spot on under eyelid; rump bright yellow shading into back by yellow or olive-green skirtings; upper tail-coverts abruptly black; wings and tail black with narrow edgings of bluish gray; a large white blotch on wing, formed by tips of middle, with tips and outer edges of greater, coverts; tail-feathers, except middle pair, with square white blotches on central third of inner web, below rich lemon yellow, clear on throat and middle belly, heavily streaked with black on jugulum, sides of breast, and sides, the streaks tending to become confluent in two or three large stripes on sides of breast, and to form a black patch on lower throat; crissum white; bill black; feet dark brown. *Adult female in spring*: Like male but duller; more olive-green on back; wing-patch separated into two bars by broader black centers of greater coverts; less heavily streaked below. *Both sexes in autumn*: Above olive-green; grayish on head; pale gray on throat; less heavily, or not at all, streaked below. *Young*: Ashy above with heavy olive skirtings on back and nearly concealed black spots; paler yellow below with less streaking; rump and tail as in adult. Length 4.50-5.25; wing 2.36; tail 1.91; bill .35.

Recognition Marks.—Smaller, rich yellow heavily streaked with black in spring; square white spots on central third of tail feathers distinctive in any plumage.

Nesting.—*Nest*: of twigs, grasses and weed-stalks, carefully lined with fine rootlets, in coniferous trees, usually three to ten feet high on horizontal branches. *Eggs*: 3.5, white, spotted and blotched with hazel, reddish brown and cinnamon. Av. size, .65 x .48.

General Range.—Eastern North America west to the Rocky Mountains and casually to British Columbia, breeding from Northern border of the United States north to Hudson Bay and the Great Slave Lake; south in winter to Mexico, Central America and the Antilles.

Occurrence in British Columbia. This species was first reported as a resident of our Province by Samuel N. Rhoads who in the summer of 1892 took a specimen at Field and saw others near Vernon. I found it fairly common at Quesnelle during the fall migrations and have taken specimens at Okanagan.

B. C. No. 6.

BLACK-POLL WARBLER.

A. O. U. No. 661. *Dendroica striata* (Forst.).

Description.—*Adult male in breeding plumage*: Top of head uniform lustrous black; cheeks, hind neck, and cervical collar white, minutely streaked with black; remaining upperparts olive-gray streaked with black; wings and tail dusky with narrow olive-gray edging on exposed webs; two loose white wing-bars formed by tips of coverts; two outer pairs of tail-feathers with subterminal white blotches; traces of white on remaining pairs, except central; underparts white, extensively streaked with black on sides, the streaks usually confluent on sides of throat; bill dark above, light below; feet pale. *Adult female in spring*: Above, including crown, grayish olive-green; everywhere streaked with black; below whitish, tinged with greenish yellow on breast and sides, and with dusky lateral streaks. *Adult male in autumn and winter*: Very different from the summer plumage. Above dull olive-green shading into olive-gray on rump, streaked on back with black; underparts pale olive-yellow faintly streaked with dusky on sides; under tail-coverts white. Length 5.50; wing 2.95; tail 1.95; bill .39.

Nesting.—*Nest*: of twigs, moss, etc., placed on lower branches of coniferous trees. *Eggs* 4 or 5, of the usual Warbler type. Av. size, .70 x .54.

General Range.—North America east of the Rocky Mountains north to Alaska and Greenland; south in winter to northern South America.

Occurrence in British Columbia.—At Quesnelle I once shot a Black-poll Warbler in the first plumage but was unable to find it in the thick brush. Through a close acquaintance with this species in Ontario I am positive of the identity, as when first seen the bird was within five feet of me and I had a good look at it. The bird is known to breed in western Alaska and it is probably of regular occurrence in the extreme northeastern part of our Province.

B. C. No. 7.

COLUMBIAN CHICKADEE.

A. O. U. No. 740 b. *Penthestes hudsonicus columbianus* Rhoads.

Description.—Forehead and lores sooty black; crown (broadly) and hind-neck slaty; remaining upperparts dark brown; throat jet black; a white area on cheeks broadening posteriorly but cut off by slaty on sides of neck; remaining underparts dull whitish, strongly washed with dull rufous on sides, flanks and under tail-coverts. Length about 5.00; wing 2.70; tail 2.65; tarsus .67.

Nest and *eggs* like those of other Chickadees.

General Range.—Resident in Rocky Mountain district from Liard River south to Montana.

Occurrence in British Columbia.—Breeding above the 4000 foot level on the mountains west of Okanagan Lake—the most westerly record taken. The birds become common easterly and northerly, always at high or moderately high levels. I found it fairly abundant in the Cariboo district in heavy timber from 2500 feet up.

B. C. No. 8.

QUEEN CHARLOTTE WOODPECKER.

A. O. U. No. 393 f. *Dryobates villosus picoideus* (Osgood).

Description.—Similar to *D. v. harrisi* (q. v. p. 420) but sides more decidedly streaked and middle of back spotted with blackish.

Range.—Queen Charlotte Islands.

B. C. No. 9.

ALPINE THREE-TOED WOODPECKER.

A. O. U. No. 401 b. *Picoides americanus dorsalis* Baird.

Description.—Similar to *P. a. fasciatus* (q. v. p. 439) but central confluence of white bars still more pronounced or complete,—back thus uninterruptedly white throughout its length centrally; white spotting on wings reduced, not extending to coverts.

General Range.—Rocky Mountain region from Arizona and New Mexico north to southern British Columbia.

Occurrence in British Columbia.—This is the resident form of the southern and eastern portion of the Province but I have never encountered it as far west as Okanagan.

B. C. No. 10.

GRAY RUFFED GROUSE.

A. O. U. No. 300 b. *Bonasa umbellus umbelloides* (Dougls.).

Description.—Similar to *B. u. togata* (q. v. p. 583) but upperparts more strongly and more uniformly gray. The hen is more rufescent than the cock and the latter does not appear to exhibit the same tendency to dichromatic variation (i. e. with gray or brown plumage) which characterize both *B. umbellus* and *B. u. togata*.

General Range.—Rocky Mountain region of the United States and British America west to Alaska, east to Manitoba, insculating with *B. u. togata* along western border of B. C. range.

Occurrence in British Columbia.—Theoretically confined to the eastern half of the Province. Very pale examples have been taken at Quesnelle and others nearly as pale and gray at Okanagan, but these pale gray forms may crop up at any locality where the character of the country and the climate favours a palely-coloured race.

B. C. No. 11.

WILLOW PTARMIGAN.

A. O. U. No. 301. *Lagopus lagopus* (Linn.).

Description.—*Adults in winter:* Tail-feathers except central pair black, tipped with white; remaining plumage entirely pure white. *Adult male in summer:* "Head and foreparts rich chestnut or orange-brown, more tawny-brown on back and rump; the richer brown parts sparsely, the tawny-brown parts more closely, barred with black; most of the wings and the underparts remaining white" (Coues). *Adult female in summer:* Similar but only the wings remaining white; coloration more tawny than in male and more heavily, uniformly, and closely barred with black. Length 15.00-17.00; wing 7.50-8.00; tail 5.50.

Recognition Marks.—Small crow size; tail (except central pair of feathers) always black; to be known from succeeding by larger size and by lack of transocular dusky stripe.

Nesting.—*Nest:* on the ground. *Eggs:* 6-12, warm buffy as to ground, boldly blotched and marbled with dark burnt sienna, nearly black. Av. size, 1.75 x 1.24.

General Range.—Of circumboreal distribution, Europe, Asia and North America; in the latter south casually to New England and Sitka, Alaska; breeding from about lat. 55 north to the limit of trees.

Occurrence in British Columbia.—Common in Atlin. A specimen in the Provincial Museum from Beaver Pass (near Barkerville) appears to be the most southerly record for the Province.

B. C. No. 12.

ROCK PTARMIGAN.

A. O. U. No. 302. *Lagopus rupestris* (Gmel.).

Description.—*Adult in winter:* As in *L. lagopus* but a blackish transocular or (at least) loreal stripe. *Adult in summer:* Underparts, except breast and sides, and wings pure white; remaining plumage (except black tail) heavily and coarsely barred brownish black and ochraceous. Length 13.00-14.75; wing 7.00-7.50; tail 4.50.

Recognition Marks.—Teal size; smaller than Willow Ptarmigan; transocular stripe distinctive.

General Range.—Northern Asia, Arctic America, Greenland, Iceland; breeding chiefly on the Barren Grounds; south irregularly in winter but not reaching northern border of United States.

Occurrence in British Columbia.—Mr. Samuel N. Rhoads in his reconnoissance in the summer of 1862 reported the Rock Ptarmigan as occurring in the Cascades and also upon the summits of the Rockies along the line of the Canadian Pacific Railway but a very careful search of the mountains in the section referred to has failed to disclose any trace of the bird in the southern portion of our Province and I am convinced that Mr. Rhoads must have accepted hearsay testimony relative to the White-tailed Ptarmigan (*L. leucurus*) which, of course, is abundant in this region. The Rock Ptarmigan does occur commonly in Atlin and as far south as the Icha Mountains in northern Chilcotin. Specimens taken in the last named locality by Mr. F. Kermode seem unusually small and dark-colored.

B. C. No. 13.

WHITE-BELLIED BRANT.

A. O. U. No. 173. *Branta bernicla glaucogastra* (Brehm.).

Description.—Similar to *B. nigricans* (q. v. p. 835) but lighter in coloration, breast light ashy-gray in abrupt contrast with black of jugulum, fading on lower belly into white of crissum, shading on sides to darker; patch of white streaks on side of upper neck reduced and not meeting fellow in front. Size of *B. nigricans*.

General Range.—Europe and northern North America; in the latter chiefly along the eastern Arctic and north Atlantic coasts, but south in winter irregularly to north Pacific and on inland waters of northern United States.

Occurrence in British Columbia.—On the 13th of December, 1903, I noticed a bunch of six Brant that kept apart from the large numbers of Black Brant in Comox harbor, V. I. After a bit of hard work I managed to kill one which proved to be an adult female of the Atlantic species. The others were undoubtedly an adult male and four young of the same species, as they all looked very light-colored. The specimen was in every way typical *B. b. glaucogastra*, with interrupted collar and black of breast sharply defined against the pale gray lower surface. I have since found the Eastern Brant a not uncommon migrant on the Pacific Coast and have taken a number of specimens. The birds usually keep to themselves in small companies and only once have I killed both species out of the same flock. In an average season probably eight per cent of the Brant which came as far south as Comox Bay are of this lighter sort. There seems to be no tendency towards intergradation unless a single male with neck-patches united in front might be so regarded.

B. C. No. 14.

HORNED PUFFIN.

A. O. U. No. 14. *Fratercula corniculata* (Naum.).

Description.—*Adult in breeding plumage:* Crown dull grayish black, narrowing to point on extreme forehead; remaining upperparts glossy blue-black, connecting with broad collar of sooty black; sides of head and remaining underparts white; bill much compressed, nearly as deep as long, vermilion; rosette at angle of mouth orange; an upright horny appendage projecting from upper eye-lid and a similar one extending horizontally backward from lower lid bluish gray; eye-lids red; irides brown; feet orange with vermilion-tinted webs. *In winter* basal portions of bill deciduous in seven plates and coloration of head and feet duller but relation of black and white in plumage unchanged. Length 14.50; wing 7.25; tail 2.75; bill 2.00, depth at base 1.80; tarsus 1.10.

Nesting.—Single roughened white egg deposited in crevice of rock or at end of burrow in bank. Av. size, 2.75 x 1.75.

General Range.—Breeding on coasts and islands of the North Pacific and adjacent polar seas; south in winter to the Kuriles and, rarely, to the Queen Charlotte Islands.

Occurrence in British Columbia.—Queen Charlotte Islands, as above. Specimens taken at Massett.

DIVISION C.

Description of species known to occur in British Columbia and whose occurrence in Washington is presumptive.

B. C. & H. No. 1.

BOBOLINK.

A. O. U. No. 494 *Dolichonyx oryzivorus* (Linn.).

Synonyms.—SKUNK BLACKBIRD. REED-BIRD. RICE-BIRD. MEADOW-WINK.

Description.—*Adult male, breeding plumage:* Head and below, rich glossy black,—the feathers having at first a buffy edging which wears off as the season advances; a broad nuchal patch of strong buff or cream; scapulars, lower back, rump, and upper tail-coverts pale white; middle back gray; upper back, wings and tail glossy to dead black with various buffy edging; tail-feathers sharply pointed; bill dull black; feet brown. *Adult female:* Ground color of plumage olive-buff,—clearest below, and in median crown, superciliary, and inter-scapular stripes; the remainder black and brownish-fuscous. *Adults in fall, and young:* Like female in spring, but buffier and with less black throughout. Length 7.00-7.50; wing 3.00-4.00; tail 2.75-3.00; bill .55; tarsus .90-1.00. Female averages a half-inch shorter, with similar proportions.

Recognition Marks.—Chewink size; black, white, and buff plumage of breeding male. The breeding female is a shy and obscurely colored bird, to be recognized by the amateur mainly thru the attentions of the male. At other seasons both sexes and all ages may be known by the frequently uttered *dink* cry. In the hand the acute tail-feathers are quite distinctive.

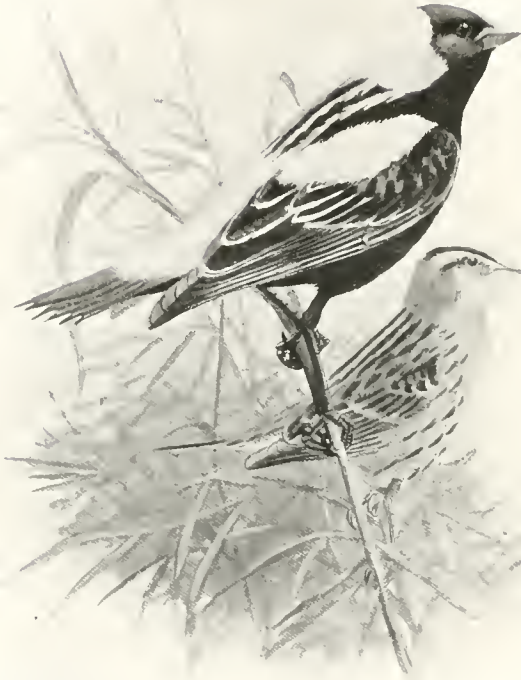
Nesting.—*Nest:* on the ground in meadows or deserted fields, a slight, grass-lined depression concealed with some art, but not definitely overarched. *Eggs:* 4-7, yellowish clay or stone-gray, heavily spotted and blotched with umber, drab, and even lavender. Av. size, .87 x .63.

General Range.—Chiefly eastern North America, west to edge of Great Plains, breeding in Northern United States and more southern British Provinces; rare or locally distributed west of the Rocky Mountains but probably extending its range westerly; in winter south to the West Indies and South America.

Occurrence in British Columbia.—This handsome species is a regular summer resident in the valley of the Okanagan. It is common at Penticton and scarce although still breeding as far north as Vernon and Lumby. I have also seen it frequently at Chilliwack on the lower Fraser, and believe that it may have bred there for I have taken both adults and young in July.

Supposed Occurrence in Washington.—Reported by Dr. Merrill as breeding in the valley of the St. Joseph River in Idaho and by Dr. A. G. Prill as occurring at Scio, Oregon. These appearances taken in conjunction with the bird's well known residence in British Columbia make its occurrence in eastern Washington, at least during migrations, almost certain.

IT is matter for the greatest congratulation that the Bobolink has made its appearance in the Pacific Northwest and we have reason to believe that the species will become thoroughly established in our more open valleys. While its ways hereabouts are still comparatively little known the very mention of its name will serve to recall to many minds pleasant memories of childhood in Ontario, or, it may be, in New England. For next after Bluebird, the coming of Bobolink marks the broadest step in that golden stair of springtime, by which the eastern bird-lover yearly attains the height of ornithological joy. His coming heralds that tidal wave of migration which begins somewhere during the last week in April, and sweeps over the land till the middle of May or the 1st of June. Without waiting for their more modest mates, the males press northward, hot-winged, to riot for a while over the dank meadows in bachelor companies, and to perfect that marvel of tumultuous song. Oh how they sing! those Bacchanals of springtime. From fence-post or tree-top, or quivering in mid-air, they pour forth such an ecstasy of liquid gurgling notes as must thrill the very clods. Such exuberance of spirit, such reckless abandon of mirth-compelling joy would cure a sick preacher on blue Monday. As the bird sings he bows and scrapes and pirouettes till, as Wheaton says, "he resembles a French dancing master in uniform, singing, fiddling, dancing, and calling off at the same time."



Allen Brooks

BOBOLINKS, MALE AND FEMALE.

But when some fine morning about a week later, a shy, plainly attired, brown lady drops from the sky with a soft *dink*, then it is that the passionate soul of the singer is fairly consumed by the inner fires of melody and desire. He dashes like mad after his lady love and pursues her at breakneck speed through the thickets of weeds and about fence-rows until he loses her in the grass. Then he hovers, or rather dances, in the air over the spot where she vanished, or else retires to a fence post, hard by, to make frantic protestations of his devotion. *Oh, geezeler, geezeler, gilpity, enkeler, oozeler, oo,* comes from that perfect throat; and somewhere between two blades of grass the lady is watching him—the sly minx—and chuckling softly to herself.

Once I heard a chorus of bachelors—or was it a musical contest?—where seven birds in the top of a little willow were singing with might and main. The effect of that wild melody of tinkling, palpitating and flute-like notes with its changeful syncopations and melodious discord will not soon be forgotten. It was an all star team of the world's most accomplished mirth makers.

All the world loves a lover, and such ardor as "Robert of Lincoln" displays is not in vain. With a heart completely won the female scrapes a little

hollow in the ground amongst the tall grass of a meadow or deserted field. Here upon a slight lining of dried grass, she deposits five or six eggs, clay-colored with amber blotches, wonderfully like the ground. The owner is mistress of the art of concealment, and usually escapes detection even from the most inquisitive. In my experience, the female flushes at long distances, but even when she permits a close approach to the nest she herself skulks a long way before rising. If you care to spend an hour or so hunting for the treasures, the safest way is to mark the spot where the bird rose, and then hunt toward your original position along the line of approach.

During the incubation the male is the same rollicksome fellow that he was during courtship; but he sings faithfully to his sitting mate, and he religiously drives intruders from the critical portion of the field. If several pairs occupy one meadow, as is frequently the case, the males spend a good deal of time trying to compel each other to respect imaginary boundaries.

The moulting of the Bobolink is one of the most interesting phases of familiar bird life. When the male arrives in the spring he is apt to have some buffy or ashy skirting on his black feathers, but these soon disappear and he stands forth in a perfect livery of black, white and buff. Under the necessity of having to provide for a growing brood, all his gaiety leaves him. He becomes anxious, silent, and careworn. Barely are the youngsters able to shift for themselves, when the father doffs the wedding garments, and puts on a

severely plain suit like that of the female. A month or so is spent by both old and young in recruiting strength—a season which is passed for the most part in loose flocks—and then the leisurely journey southward is begun, about the twentieth of August. The sole and characteristic note from this on is a metallic *dink* or *chink*. There is little concert about their southward movement, and the air in middle latitudes may resound with *dink* cries at any time of night, and often in the daytime, for a month. The birds gather in immense numbers in the reeds of the Chesapeake region, and are slaughtered by thousands for the market, where they are known as "Reed-birds." Later in their retreat they infest the rice-swamps of the Carolinas and Georgia, where they are also killed in great numbers, with perhaps some little show of justice. But surely if our Southern neighbors could realize of how much delicious music they deprive us another year, they would not be so cruel. It is a great pity that the burden of the musician's support does not fall more heavily upon us, for how cheerfully would we bear it!

B. C. & H. No. 2.

HOARY REDPOLLS.

A. O. U. No. 527 a. *Acanthis hornemannii exilipes* (Cooper).

Description.—*Adult*: Somewhat similar to *A. linaria* (q. v. p. 82) but much paler, less streaked and more extensively white; crown crimson; feathers of extreme forehead dusky tipped with hoary; lores and throat (narrowly) dusky; color pattern of upperparts as in *linaria* but dusky streaks smaller and less distinct, the flaxen paler, nearly white; rump pure white or rosy-tinged, unmarked; underparts white, the breast tinged with rosy; the sides streaked, faintly and sparsely, with dusky, the crissum nearly immaculate. Length much as in *A. linaria*, the feet smaller and weaker.

General Range.—Of circumboreal distribution but not so northerly as *A. hornemannii*; breeds in Arctic and sub-arctic America and migrates to northern border of United States in winter.

Occurrence in British Columbia.—Typical specimens of this form have been taken in winter at Quesnelle by Mr. Sidney Williams. One absolutely typical as regards shape of bill but showing an admixture of *linaria* in plumage was taken by myself at Sumas on the southern border.

Supposed Occurrence in Washington.—Redpolls frequent the eastern portion of the State in myriads in winter and there is no reasonable doubt that the hosts include a small percentage of this species, as elsewhere along the northern border of the United States.

B. C. & H. No. 3.

MCCOWN'S LONGSPUR.

A. O. U. No. 539. *Rhynchophanes mccownii* (Lawrence).

Description.—*Adult male in summer*: Crown black bordered by white superciliary; remaining upperparts slaty gray varied by dusky streaks and lighter gray and ochraceous edgings; median coverts chestnut; a rectangular area of white centrally on tail involving all feathers save middle pair; sides of head whitish with slaty auriculars; throat white bounded by black maxillary stripe; a crescentic patch of black on breast, shading posteriorly through slaty black, thence to whitish of remaining underparts. Bill blackish paling basally below; feet brownish black. *Female in summer*: Similar to male but paler and duller, crown like back and breast slaty gray; bill and feet lighter brown. *In winter*, plumage of both sexes duller and black pattern of adult male nearly effaced by grayish ends of feathers. Length about 6.00; wing 3.50; tail 2.25; bill .50; tarsus .65.

General Range.—Region of the Upper Missouri and its tributaries, north to Saskatchewan, west regularly to Rocky Mountains, casually further; south in winter to Texas, Arizona and Mexico; breeds from Colorado northwards.

Occurrence in British Columbia.—I shot an adult male at Chilliwack on June 1st, 1887, and two years later took two females at the same spot. These could hardly have been accidental and their occurrence at that season hints at a northern distribution in the breeding season of which we are still ignorant.

Supposed Occurrence in Washington.—Because of the configuration of the land as well as proximity all Chilliwack and Sumas records are presumptive for northern Washington.

B. C. & H. No. 4.

HARRIS'S SPARROW.

A. O. U. No. 553. *Zonotrichia querula* (Nutt.).**Synonym.**—HOODED CROWN SPARROW.

Description.—*Adult male*: Crown, face, and throat jet black; sides of head ashy white; breast and below white; sides, flanks, and crissum with a tawny wash and obscurely streaked; above, brown of various shades, inclining to bay on the nape, decidedly olivaceous on rump and upper tail-coverts; feathers of upper back, scapulars, and wing-coverts black centrally; wings and tail fuscous; bill coral-red. *Female*: Similar but with black of head and throat restricted. *In winter* the plumage of both sexes is toned down by ochraceous wash of upper parts and sides, and the feathers of the crown are bordered narrowly with ashy or buff. Length 6.75-7.75; wing 3.20-3.60; tail 3.30-3.75.

Recognition Marks.—Chewink size; black hood (especially throat) of adults.

Nesting.—Known only from Bendire's description of a set not certainly identified. Supposed to nest on ground or low in bushes. *Eggs* white, thickly sprinkled with brown. Av. size, .85 x .65.

General Range.—Middle United States from Illinois, Missouri, and Iowa west to middle Kansas and the Dakotas, and from Texas north to Manitoba and probably Hudson Bay. Accidental on Vancouver Island and in British Columbia and Oregon.

Occurrence in British Columbia.—A notable invasion of British Columbia by this sparrow of the Middle West occurred during the winter of 1894-5. Specimens were taken by A. T. Maynard at Cadboro Bay in October, by W. B. Anderson at Comox in November, and by the writer at Sumas in January. At the last-named locality the pair taken were associated with Juncos in a barn-yard on Sumas Prairie. Another was seen a month later at Chilliwack. All of these, be it noted, were young birds.

Occurrence in Washington.—Presumptive, as above.

B. C. & H. No. 5.

WESTERN GRASSHOPPER SPARROW.

A. O. U. No. 540 a. *Coturniculus savannarum bimaculatus* (Swains.).

Description.—*Adults in spring*. Crown blackish brown, parted by a median stripe of buffy gray; nape gray, spotted with chestnut; remaining upperparts black and fuscous, feathers edged with gray and tipped with rufous in varying proportions (a single feather, as from the greater wing-coverts, will exhibit the four colors); below, buffy gray, brightest on the breast; the sides and flanks washed with rufous; an elongated spot over the eye, bend of the wing, and edge of wing near alula, yellow; bill horn-color above, yellow below; feet yellow. *In winter*: Brighter colored, with less of black and more of chestnut. Length 4.85-5.20; wing 2.50; tail 1.75; bill .43. Female slightly smaller.

Recognition Marks.—Warbler size; unmarked below; bright yellow edge of wing; grasshopper notes; an obscure, close-hiding, terrestrial species.

Nesting.—*Nest*: on the ground, well concealed by grass tussock; made of grasses, and sometimes lined with hair. *Eggs*: 4-6, clear white, speckled and spotted with reddish brown, chiefly about larger end. Av. size, .73 x .55.

General Range.—Western North America from the Plains to the Pacific, south to Mexico and Lower California.

Occurrence in British Columbia.—A scarce though regular breeder throughout the Okanagan Valley from Penticton and Osoyoos to Vernon.

Supposed Occurrence in Washington.—If as above, bird must occur also in the lower Okanogan valley upon the Washington side and probably in the parallel valleys of Ferry and Stevens counties.

B. C. & H. No. 6.

ALASKAN YELLOW WARBLER.

A. O. U. No. 652 b. *Dendroica aestiva rubiginosa* (Pallas).

Description.—Similar to *D. aestiva* (q. v. p. 178) but upperparts darker and duller, more olivaceous and with narrower edgings on wings and tail. Adult female also duller yellow below.

General Range.—Alaska both coastwise and in the interior, south through British Columbia to Vancouver Island; south in winter to southern California, Texas and Central America.

Occurrence in British Columbia.—As above: Vancouver Island specimens are doubtfully referred to this form but they average lighter than those taken further north.

Supposed Occurrence in Washington.—Doubtless the commoner form during the migrations but alleged difference in coloration not sufficient to arouse suspicion afield.

B. C. & H. No. 7.

WILSON'S WARBLER.

A. O. U. No. 685. *Wilsonia pusilla* (Wils.).

Description.—Similar to *W. p. pilcolata* (q. v. p. 208) but averaging smaller; coloration duller, the upperparts more olivaceous, the yellow of underparts not so bright. Wing 2.16; tail 1.89; bill .32; tarsus .70.

General Range.—Eastern North America west to eastern border of Great Plains, casually west to and into Rocky Mountains during migrations; breeding north of United States to Labrador, Hudson Bay and Manitoba; south in winter to Santo Domingo and eastern Mexico.

Occurrence in British Columbia.—The Black-capped Warblers undoubtedly shade into the duller form in the eastern portion of the Province during the migrations. Resident birds at Okanagan appear to be *W. p. pilcolata*.

Supposed Occurrence in Washington.—Probably casual during the migrations east of the Cascades.

B. C. & H. No. 8.

AUDUBON'S HERMIT THRUSH.

A. O. U. No. 759 a. *Hylocichla guttata auduboni* (Baird).

Synonym.—ROCKY MOUNTAIN HERMIT THRUSH.

Description.—"Similar in coloration to *H. g. squoiensis* [q. v. p. 237] but decidedly larger" (Ridgway). Wing 4.00; tail 2.95; bill .58; tarsus 1.18.

General Range.—Breeding in Rocky Mountain district of United States and British Columbia from Arizona northward; also westward to Lower California and Nevada; south in winter to Texas and the highlands of Guatemala.

Occurrence in British Columbia.—Resident in the eastern portion of the Province.

Supposed Occurrence in Washington.—Probably the resident form in Stevens County.

B. C. & H. No. 9.

LONG-TAILED CHICKADEE.

A. O. U. No. 735 a. *Penthestes atricapillus septentrionalis* (Harris).

Description.—Similar to *P. atricapillus* (q. v. p. 273) but averaging larger and with longer tail; coloration also clearer and brighter; white edgings of wings and tail broader and purer; black of cap rather more extensive; white of underparts purer.

General Range.—Rocky Mountain region of United States and British Columbia.

Occurrence in British Columbia.—The resident form in the eastern part of the Province. The "island" of true *atricapillus* probably encroaches upon our southern borders but all my specimens have been labelled *septentrionalis* and have passed unchallenged in the East.

Supposed Occurrence in Washington.—Probably the resident form in the mountain district of the extreme northeastern portion of the State.

B. C. & H. No. 10.

GRAY KINGBIRD.

A. O. U. No. 445. *Tyrannus dominicensis* (Gmel.).

Description.—Similar to *T. tyrannus* (q. v. p. 360) but larger; crown-patch as before but upperparts grayish plumbeous, merely darker on head; below white, shaded with ashy on breast and sides, under wing- and tail-coverts faintly tinged with yellow; wings and tail dusky, edged with whitish or yellowish, the tail barely touched on tip with whitish. *Five or six outer primaries emarginate*. Length 9.00; wing 4.50; tail 4.00; bill 1.00.

General Range.—Florida and the West Indies, north occasionally to South Carolina; accidental in Massachusetts and British Columbia.

Occurrence in British Columbia.—Accidental. A specimen was taken on Cape Beale

on the 20th of September, 1880, by Miss Cox and presented to the Provincial Museum. The larger species of this group, the *Tyrannidae*, are somewhat prone to wander but this is perhaps the most remarkable instance upon record.

B. C. & H. No. 11.

AMERICAN BARN OWL.

A. O. U. No. 365. *Aluco pratincola* (Bonap.).

Description.—*Adult*: General color of upperparts ochraceous yellow; this lightly overlaid or mottled with gray, the typical mottled gray feathers having dusky centers and white tips; indistinct dusky bars on wing-quills and tail-feathers, clearest centrally; entire underparts white, usually more or less washed with fulvous or tawny, and sparingly but sharply speckled with dusky; facial disk white or whitish or tinged variously with ochraceous-buff, dark brown, or even claret; the edges of the disk rusty and dark brown on the tips of the feathers; bill light; feet light, nearly naked. The folded wing extends to or beyond the end of the tail. *Nestlings* are covered with fluffy white down. Length 14.00-18.00; wing 12.25-14.00; tail 5.25-7.50; tarsus 2.25-3.25; bill along culmen 1.00-1.25.

Recognition Marks.—Crow size; light colors, especially below; strongly marked facial disk; top-heavy appearance.

Nesting.—*Nest*: in hollow trees or in crevices about towers, pigeon-houses, earth-banks, etc., lined scantily with sticks and trash. *Eggs*: 5-11, white, ovate. Av. size, 1.70 x 1.30.

General Range.—United States, rarely to the northern border, and Ontario, southward through Mexico; normal northern limit of breeding range about latitude 41°.

Occurrence in British Columbia.—A breeding female just captured (April, 1000) near Ladner's Landing gives this southern species an established place upon our records. The bird is so exclusively nocturnal in its habits that our former oversight is not at all to be wondered at.

Presumed Occurrence in Washington.—There are a number of Oregon records for this species and the record above noted makes a strong case for the Barn Owl as a bird of Washington.

B. C. & H. No. 12.

GREAT HORNED OWL.

A. O. U. No. 375. *Bubo virginianus* (Gmel.).

Description.—Similar to *B. v. lagophonus* (q. v. p. 478) but coloration averaging darker. [Western examples probably represent merely individual variation of *B. v. lagophonus* or *B. v. saturatus*, since *B. virginianus* is strictly non-migratory. W. L. D.]

General Range.—Eastern North America north to Labrador, west to eastern border of Great Plains, or, northerly, to Rocky Mountains (?).

Occurrence in British Columbia.—Two specimens taken at Chilliwack when laid alongside of an Eastern (Ontario) bird were absolutely indistinguishable, being very rufous and moderately light-colored.

B. C. & H. No. 13.

RED-BELLIED HAWK.

A. O. U. No. 330b. *Buteo lineatus elegans* (Cass.).

Description.—*Adult*: Above rich chocolate-brown, fuscous and grayish brown, varied by rufous and ochraceous, especially on head and back, and by whitish on scapulars and inner quills; lesser wing-coverts extensively rufous, forming a red "shoulder"; wing-quills and greater coverts dusky-barred and white-spotted and -tipped, forming irregular bars; ends of primaries and tail principally blackish, the latter crossed by four or five narrow, white bands, and tipped with white; upper tail-coverts barred and tipped with white, affording occasional suggestion of white rump; four outer primaries deeply emarginate; underparts rich chestnut-rufous, of variable intensity, sometimes dark enough to obliterate all markings, at others exhibiting streaks of darker on sides of neck, throat and breast, and barring on tibize, but under-pattern of tail always distinct. Cere and feet chrome-yellow; bill blackish; claws black. *Immature*: Different; dark brown or fuscous above, only traces of rufous on wing-coverts, etc.; spotting of quills ochraceous; tail dusky, with seven or eight grayish bars which become more ochraceous and gradually obsolete basally; underparts not so richly colored as in adult, heavily streaked and striped with dark brown. Adult male, length: 18.00-20.00; wing 11.50-13.50; tail 7.50-9.00. Adult female, length: 20.00-22.00; wing 12.00-14.00; tail 8.50-10.00.

Recognition Marks.—Crow size; rufous shoulder distinctive; underparts usually rich red; averaging a little smaller than *Scozonsoni*.

Nesting.—*Nest*: in trees, of sticks, sometimes lined with bark strips and the like. *Eggs*: 3-5, pale bluish white, with a rough or chalky surface, and spotted or blotched with rufous or yellowish brown; occasionally unmarked. Av. size, 2.14 x 1.67.

General Range.—Western Texas to the Pacific, north, regularly, to Oregon, less commonly to British Columbia; south to Lower California.

Occurrence in British Columbia.—I have twice seen undoubted adults of this Buzzard at Chilliwack but have been unable to take a specimen. The coloration of the tail and the under surface of the wings is of a very conspicuous pattern and when the bird is seen sailing overhead its identification is easy to one acquainted with the Eastern form.

Occurrence in Washington.—Presumptive as above. Also tentative records for East-side.

B. C. & H. No. 14.

WHITE GYRFALCON.

A. O. U. No. 353. *Falco islandicus* Brunn.

Description.—*Adult*: General color pure white, unmarked on head and underparts, or with mere traces of blackish on crown and flags; remaining upperparts marked, barred or transversely spotted in variable pattern with slaty black—much like the Snowy Owl in this regard. Bill bluish; cere, eyelids and feet yellow; iris brown. *Young birds* are still white but are marked more heavily with dark brown, chiefly in lengthwise pattern. Length of adult male 22.00; wing 14.00-15.00; tail 9.00; bill .95; tarsus 2.40. Female 23.00; wing 15.50-16.50; tail 10.00.

General Range.—Arctic regions, including Arctic America and Greenland; wandering south in winter to Labrador, Maine and British Columbia.

Occurrence in British Columbia.—A fine adult male was brought to me at Comox in December, 1903. It had been killed by a boy with a "22" rifle on the 4th of the month.

B. C. & H. No. 15.

RICHARDSON'S GROUSE.

A. O. U. No. 297 b. *Dendrapus obscurus richardsonii* (Dougl.).

Description.—Similar to *D. o. fuliginosus* (q. v. p. 571) but somewhat lighter in coloration, the female also with less of tawny; the terminal gray of the tail (in both sexes) reduced or wanting.

General Range.—Rocky Mountain region of the northern United States and British Columbia, shading into *D. obscurus* in southern Idaho and Wyoming, and into *D. o. fuliginosus* along western boundaries of range.

Occurrence in British Columbia.—All specimens taken east of the Cascades are referred to this form.

Supposed Occurrence in Washington.—We should expect to find the Richardson Grouse the prevailing form in the Kalispell Range and in the Blue Mountains, but further study is necessary to elucidate this point.

B. C. & H. No. 16.

SNOWY HERON.

A. O. U. No. 197. *Egretta candidissima* (Gmel.).

Synonym.—LITTLE WHITE EGRET.

Description.—*Adult in breeding plumage*: Entire plumage pure white; a bunch of forty or fifty "aigrettes" originates on middle of back and reaches to or beyond tail; character of plumes as in *Herodias egretta* (q. v. p. 629) but delicately *recurved toward tip*; a lengthened occipital crest of decomposed feathers; feathers on side of neck below somewhat similar to those on back, not recurved; lores, eyes, and toes yellow; bill black, yellow at base; legs mainly black. *Adult after breeding season and immature*: Without dorsal plumes. Length 20.00-27.00; wing 9.75; bill 2.00-3.50; tarsus 4.15.

General Range.—Temperate and tropical America from Long Island and Oregon south to Argentine Republic and Chili, casually to Nova Scotia and southern British Columbia.

Occurrence in British Columbia.—Wanderer and perhaps formerly summer visitor

from the south. Two specimens taken on Burrard Inlet in May, 1879, one of which is now in the Provincial Museum.

Occurrence in Washington.—Has undoubtedly crossed the State, as above.

B. C. & H. No. 17.

WHITE-FACED GLOSSY IBIS.

A. O. U. No. 187. *Plegadis guarauna* (Linn.).

Description.—*Adult.* Bill curved downward, black, reddening on tip; lores and eyelids naked, lake-red, this area and base of bill above and below surrounded by narrow border of white feathers, the "face"; head, neck and underparts rich purplish chestnut; upperparts dark, with brilliant metallic iridescence of green, golden-green, violet and purple—surpassingly beautiful! *Young* entirely lustrous green, giving place to brownish or gray below in transition to chestnut of adult. Length of adult male 22.00-24.00; wing 10.00-11.00; tail 4.00; bill 5.00-5.50; tarsus 3.75. Female smaller.

Nesting.—*Nests* in colonies in reeds; composed of broken-down reeds attached to living ones; well built and deeply cupped. *Eggs*: 3 or 4, deep bluish-green. Av. size, 2.00 x 1.40.

General Range.—Chiefly western United States, especially western Texas, east to Florida, north to Kansas, Colorado, Wyoming and Oregon; casually to British Columbia; south through West Indies, Mexico, Central America and tropical South America.

Occurrence in British Columbia.—One specimen taken in the early fall of 1904 at Sardis (Chilliwack Valley), a young bird in first plumage. Another is said to have been taken on Salt Springs Island, and there is supposed to be a still earlier record but there are no specimens to substantiate these.

Supposed Occurrence in Washington.—These birds still breed in large numbers about some of the interior lakes of Oregon. Very similar conditions exist on a smaller scale in eastern Washington and it is almost certain that the birds formerly occurred here if they do not now do so.

B. C. & H. No. 18.

STILT SANDPIPER.

A. O. U. No. 233. *Micropalama himantopus* (Bonap.).

Description.—*Adult in summer.* Upperparts blackish with considerable buffy, or tawny, and white edging; a blackish line from bill to eye; auriculars rufous,—the color continued indistinctly around back of head; top of head dusky streaked with whitish; the remainder of head and neck dull white, dusky-streaked; wing-coverts and secondaries grayish, the latter edged with white; primaries fuscous; rump ashy; upper tail-coverts white, barred and striped with dusky; underparts whitish, streaked with dusky and ochraceous on fore breast, elsewhere dusky-barred; bill and feet greenish black. *Adult in winter:* Above brownish gray with traces of black and tawny mottling, or not, the feathers more or less edged with whitish; upper tail-coverts white; the tail white, the feathers bordered with brownish gray; underparts white shaded with grayish, and more or less dusky-streaked on sides of neck, throat, and sides; legs and feet greenish yellow. *Immature:* Similar to adult in winter but blackish above, and with edgings of ochraceous-buff; breast and sides more or less buffy-tinged. Length 7.50-9.00; wing 5.15; bill 1.65; tarsus 1.62.

Recognition Marks.—Chewink size; bill with flattened punctate tip; comparatively long legs.

General Range.—Eastern North America, breeding north of the United States, and migrating in winter to Bermuda, West Indies, and Central and South America. Casual west of the Rockies.

Occurrence in British Columbia.—I shot two specimens September 10th, 1899, at Sumas Lake, the only ones I have ever seen. Both birds were in the first plumage.

B. C. & H. No. 19.

SOLITARY SANDPIPER.

A. O. U. No. 256. *Helodromas solitarius* (Wils.).

Description.—Similar to *H. s. cinnamomeus* (q. v. p. 671) but sides of head darker and spotting of upperparts white or creamy, never cinnamomeus.

General Range.—North America except Pacific coast region, but casually westward to Pacific; breeding chiefly north of the United States and wintering in South America south to Argentine Republic.

Occurrence in British Columbia.—Both forms of the Solitary Sandpiper occur in the

Okanagan district in about equal numbers, as is proved by a series collected by myself in the past four years. Neither breed, though young with down still adhering have been taken. The typical form is also of regular occurrence at Chilliwack on the west side of the Cascade Mountains during the migrations.

Occurrence in Washington.—Must traverse the State during migrations en route to northern breeding grounds.

B. C. & H. No. 20.

LONG-TAILED JAEGER.

A. O. U. No. 38. *Stercorarius longicaudus* Vieill.

Description.—*Adult*: Top of head, including eyes and lores, black; remainder of head and neck abruptly white (narrowly above, on occiput only) tinged save on chin and throat with straw-yellow; underparts white; remaining upperparts deep slaty, changing on remiges and lateral tail-feathers to lustrous black; wing-linings and under surface of tail slaty; central pair of tail-feathers greatly produced, 8-10 inches beyond lateral feathers, blackening distally. Bull dusky; tarsi leaden-blue; tibiae and feet black. There is a dark phase wherein the entire plumage becomes slaty or sooty, as in other species of Jaegers, but this is very rare, almost negligible. Length of adult 20.00-23.00, of which the tail 10.00-16.00, the lateral tail-feathers about 6.25; wing 13.50; bill 1.18; tarsus 1.00.

Recognition Marks.—Small crow size; smaller in body than the Parasitic Jaeger; the greatly lengthened and tapering central pair of tail-feathers distinctive.

General Range.—The northern hemisphere, breeding chiefly within the Arctic circle; irregularly south in winter to the northern border of United States, casually to California and Gulf of Mexico.

Occurrence in British Columbia.—This bird is a scarce though regular fall migrant down the lower Fraser Valley, being usually seen about the time of the autumnal equinox. I have seen birds at Sumas headed straight south, so that their occurrence in Washington is a certainty. It also occurs occasionally in fall at least upon the lakes of the interior and I have taken specimens at Okanagan. Only white-breasted adults and pale-colored young have been seen at any time and this entire absence of melanistic individuals I have found to be characteristic of *parasiticus* as well.

B. C. & H. No. 21.

GLAUCOUS GULL.

A. O. U. No. 42. *Larus hyperboreus* Gunnerus.

Description.—*Adult in summer*: Mantle pale pearl gray; remaining plumage pure white; primaries entirely white or pale gray basally fading into white on tips, their shafts straw-yellow. Bill chrome yellow with vermilion spot at angle; feet and legs livid flesh-color; iris light hazel. *In winter*: Iris golden yellow; bill and feet paler than in summer; head and hind-neck lightly touched with pale brownish gray. *Immature*: Sordid white, shaded below with brownish and slightly mottled above with pale reddish brown; bill flesh-colored, tipped with black—always the whitest of local young gulls. Length of adult: 2.00-32.00; wing 17.00-18.50; tail 8.00; bill 2.50-3.00, depth at nostril .80; tarsus 3.00-3.25.

Recognition Marks.—Largest of local gulls; plumage almost white above; primaries with tips broadly white distinctive.

General Range.—Northern and Arctic seas, circumpolar; south in winter in North America casually to San Francisco, the Great Lakes and Long Island.

Occurrence in British Columbia.—One immature bird taken at Comox Dec. 15th, 1903. Large white-winged gulls either of this species or one of its congeners are frequently seen on Okanagan Lake, but these seem more the size of *leucopterus* of which there is no western record.

Supposed Occurrence in Washington.—Large white birds which are almost certainly immature specimens of true *glauca* are occasionally seen in winter on Puget Sound but in default of specimens we have preferred to enter them here. There is no rumor of the appearance of adults hereabouts but those which have been recorded from the California coast doubtless passed along our western shores.

B. C. & H. No. 22.

IVORY GULL.

A. O. U. No. 39. *Pagophila alba* (Gunn.).

Description.—*Adult*: Plumage entirely pure white, the shafts of the primaries straw

yellow. Bill greenish-gray changing to yellow on tip and along tomlia; eyelids red; irides brown; feet black. *Immature*: "Front and sides of head dusky gray; upper part of neck all round, irregularly spotted with the same. Scapulars and upper and under wing-coverts, with brown and black spots, most numerous along lesser coverts. Tips of primaries and tail-feathers with dusky spots" (Coates). Length of adult 16.00-19.00; wing 13.75; bill 1.40, depth at nostril .45; tarsus 1.45.

General Range.—Polar seas, south casually in winter to northern United States.

Occurrence in British Columbia.—A fine adult of this species was taken at Penticton by Mr. J. T. Studley on October, 1897. No cold or stormy weather had occurred to account for the appearance of this Arctic Gull so far from its habitat. Another specimen was taken at Dease Lake, Cassiar, by James Porter, Esq., in September, 1899.

B. C. & H. No. 23.

EUROPEAN WIDGEON.

A. O. U. No. 136. *Mareca penelope* (Linn.).

Description.—*Adult male*: Similar to that of *M. americana* (q. v. p. 770) but top of head buffy or creamy buffy instead of white,—green wanting or showing only in traces; throat blackish; red of head and neck rufous-brown. *Adult female*: Similar to that of *M. americana* but head and neck deeper ochraceous-buff or rusty. Size of *americana*.

General Range.—Northern parts of the Old World and Greenland. In North America breeds on the Aleutians and wanders south, irregularly to California, less commonly along the Atlantic sea-board and in the eastern interior.

Occurrence in British Columbia.—"Rare. Two specimens, one taken near Victoria February, 1899, and another near Saanich" (Kermode).

Occurrence in Washington.—There are a number of Oregon records and the bird undoubtedly occurs on Puget Sound, probably with some degree of regularity, in winter and on migrations.

B. C. & H. No. 24.

ROSS'S SNOW GOOSE.

A. O. U. No. 170. *Chen rossii* Cassin.

Description.—Coloration exactly as in *C. hyperboreus* (q. v. p. 821). "Bill small, outline of feathers on side of upper mandible nearly straight instead of strongly convex, studded at base with numerous papillae, and much less exposure of teeth in a blackish recess than in any of the other species." Length about 21.00; wing 14.50; tail 5.00; bill 1.50; tarsus 2.50.

General Range.—Arctic America, in the interior; south in winter through western United States to southern California.

Occurrence in British Columbia.—Rather rare but several records from widely separated localities.

Occurrence in Washington.—A moral certainty, since not uncommon in winter in California. Sportsmen should be on the lookout for a white Goose no bigger than a Mallard.

B. C. & H. No. 25.

EMPEROR GOOSE.

A. O. U. No. 176. *Phalacrocorax canadensis* (Sevast.).

Description.—*Adult*: General plumage bluish-gray tinged with lilac, each feather sharply defined by a twinned crescent of black and white, producing a handsomely scaled appearance; head and back of neck white tinged with brownish yellow; throat and fore-neck, broadly, black; flight feathers and their coverts slaty; tail white; bill chiefly livid flesh-color; feet orange-yellow. *Young birds* are less conspicuously crescent-marked and have head and neck dusky speckled with white. Length of adult 25.00-28.00; wing 15.00-17.00; tail 5.00-6.00; bill 1.50; tarsus 3.00.

General Range.—Coasts and islands of Bering Sea, chiefly about Norton Sound and the Yukon delta; wintering among the Aleutians and along the coasts of southern Alaska, casually south to northern California.

Occurrence in British Columbia.—Specimen taken at Chemainus, V. I., Nov. 25th, 1894. The bird was shot while in company with some Canada Geese and was exposed for sale in a Victoria market, where John Fannin secured it.

Occurrence in Washington.—No positive record but birds reported from California must have passed along our western coast.

DIVISION D.

WASHINGTON HYPOTHETICAL LIST.

Description of species not known to occur in British Columbia but likely to occur or to have occurred in Washington. The list includes not only those species whose claim to admission as birds of Washington rests only upon presumptive or inconclusive evidence but those whose status as species is not clearly established.

H. No. 26.

ARKANSAW GOLDFINCH.

A. O. U. No. 530. *Astragalinus psaltria* (Say).

Description.—*Adult male*: Crown black; wings black, the primaries white basally, showing exposed patch, quills and greater coverts white-tipped; tail black, the three outermost feathers extensively white on inner webs; remaining upperparts plain olive-green; ear-coverts olive; underparts canary yellow. *Female and young*: Similar but duller, crown color of back and white tail-spots reduced or wanting. Length about 4.50; wing 2.50; tail 1.60; bill .38.

General Range.—Western United States north to Colorado, Utah and Oregon, south to Cape St. Lucas and Sonora.

Supposed Occurrence in Washington.—Not uncommon in the vicinity of Portland and therefore likely to be found along our southern border.

H. No. 27.

LE CONTE'S SPARROW.

A. O. U. No. 548. *Ammodramus leconteii* (Audubon).

Description.—*Adults*: "Crown with two black stripes in sharp contrast to buffy and grayish median stripe; sides of head and superciliary buffy or yellowish brown; hind-neck chestnut, feathers edged with grayish; rest of upperparts brownish, marked strikingly with blackish and buffy, the feathers black, notched with grayish, with rufous and buffy cream U-shaped edgings; belly white; sides and flanks streaked; bill small and slender; tail graduated" (Bailey). Length about 5.00; wing 2.00; tail 1.95; bill .37.

General Range.—The Great Plains, breeding in prairie marshes north to Assiniboia, east to Illinois; south in winter to Southern States; accidental in Idaho.

Supposed Occurrence in Washington.—In June, 1905, I saw a sparrow with a graduated tail in a marsh adjoining Brook Lake, which I suspect to have been this species. The bird skulked very closely and I was unable to obtain it.

H. No. 28.

OREGON SONG SPARROW.

A. O. U. Waiting List. *Melospiza melodia phaea* (A. K. Fisher).

Description.—Similar to *M. m. morphna* (q. v. p. 142) but darker: most like *M. c. rufina* but much smaller. Wing .68; tail .65; bill .11; tarsus 22.2.

General Range.—"Immediate vicinity of coast from Rogue River to Yaquina, Oregon."

Occurrence in Washington.—A specimen taken by Mr. J. M. Edson near Bellingham is so identified by the U. S. Bureau of Biological Survey, but the very fact of its occurrence in the heart of the range of *M. m. morphna* argues strongly against the validity of the proposed subspecies.

H. No. 29.

SHUMAGIN FOX SPARROW.

A. O. U. 585 a. *Passerella iliaca unalaschensis* (Gmelin).

Description.—Type of Northwestern forms—see page 148.

General Range.—"Shumagin Islands and Alaska Peninsula (Kukak Bay, etc.), Alaska; Unalaska Island?" (Ridgway).

Occurrence in Washington.—Certain to occur during the migrations. I have narrowly observed Fox Sparrows which appeared under the binoculars to belong here, but we have taken no specimens.

H. No. 30.

YAKUTAT FOX SPARROW.

A. O. U. *Passerella iliaca annectens* Ridgway.

Description.—"Similar to *P. i. insularis* (q. v. p. 148) but smaller (the bill especially) and coloration slightly browner. Young much darker than corresponding stage of *P. i. insularis*" (Ridgway).

General Range.—"Coast of Alaska from Cross Sound to Prince William Sound (to Cook Inlet); in winter south to California.

Supposed Occurrence in Washington.—An adult female taken by Miss Jennie V. Getty at Kirkland in the winter of 1908-9, has just been returned from Washington, D. C., bearing the label "*Passerella iliaca meruloides*." Having mislaid my copy of the *Daily Taxonomic Bulletin* I am unable (on the eve of coming from press) to precisely allocate this specimen but presume that it belongs near here.

H. No. 31.

ARCTIC TOWHEE.

A. O. U. No. 588 *Pipilo maculatus arcticus* (Swains.).

Description.—"Similar to *M. m. megalonyx* (q. v. p. 160) but white markings on scapulars, wings, etc., more extensive, the black of back, etc., more strongly tinged with olivaceous; feet smaller with less developed claws, that of the hind toe not longer than its digit

General Range.—"Central region of N. Am. from limit of *erythrophthalmus* in Kansas, Nebraska, and Dakota, to that of *oregonus* in Oregon, Washington and British Columbia; N. in summer to the region of the Saskatchewan; S. in winter to Texas; in the S. Rocky Mt. region melting into *megalonyx*" (Coues).

Occurrence in Washington.—The doctors disagree as to the precise northern limits of *megalonyx*, and it may well be that specimens from the northeastern portion of the State should be entered as *arcticus*.

H. No. 32.

PALE VARIED THRUSH

A. O. U. 763 a. *Ixoreus naevius meruloides* (Swains.).

Description.—Said to differ from *I. naevius* (q. v. p. 248) only in the lighter coloration of the female. Alleged to be the breeding form from the northern interior of Alaska. If the subspecies is valid it undoubtedly occurs in Washington during migrations.

H. No. 33.

CHESTNUT-BACKED BLUEBIRD.

A. O. U. No. 767 a. *Sialia mexicana bairdi* Ridgway.

Description.—"Similar to *S. mexicana* (q. v. p. 254) but back of adult male pure chestnut in contrast with surrounding blue.

General Range.—Rocky Mountain region south to Mexico.

Supposed Occurrence in Washington.—Dr. J. C. Merrill, writing from Fort Sherman, Idaho, enters the local Bluebirds as *bairdi*. Specimens from our northeastern border are undoubtedly transitional but it is perhaps well enough to regard our eastern line as the arbitrary limit of *occidentalis*.

H. No. 34.

ROCKY MOUNTAIN NUTHATCH

A. O. U. No. 727 c. *Sitta carolinensis nelsoni* Mearns.

Description.—"Similar to *S. c. aculeata* (q. v. p. 287) but larger, with stouter bill; underparts less purely white, more strongly shaded with gray on sides and flanks; white subterminal spaces on lateral rectrices larger" (Ridgway).

General Range.—Rocky Mountain district south to northern Mexico.

Supposed Occurrence in Washington.—May well prove to be the resident form in Stevens and adjacent counties.

H. No. 35.

ROCKY MOUNTAIN CREEPER.

A. O. U. No. 726 b. *Certhia familiaris montana* Ridgway.

Description.—Similar to *C. f. zelotes* (q. v. p. 205) but decidedly lighter and less brown above, with tawny of rump lighter and whitish streaks broader; superciliary broader, more purely white; underparts brighter; averaging larger.

General Range.—Rocky Mountain district breeding from Arizona and New Mexico north to Alaska.

Supposed Occurrence in Washington.—Case very similar to that of the Bluebirds above.

H. No. 36.

WESTERN BLACK PHOEBE.

A. O. U. No. 458 a. *Sayornis nigricans semiatra* (Vigors).

Description.—General color sooty brown or blackish, most intense on head and breast; belly and posterior underparts abruptly pure white; lining of wings, edges of inner secondaries, and outer web of outer tail-feathers whitish. Length 6.50-7.00; wing 3.70; tail 3.50; bill .50; tarsus .67.

General Range.—"Mainly in Lower Sonoran zone on the Pacific Coast, from Oregon to Colima, Mexico; also most of Arizona" (Bailey).

Supposed Occurrence in Washington.—The record by Hubbard (Zoe III., July, 1892, p. 143) of a bird seen near Chehalis has been made the basis of several inferential publications. It is probable that the bird seen was really the Western Wood Pewee (*Myiochanes richardsonii*) which is significantly omitted from his list. Also concerning the much-quoted Salem record (American Naturalist, 1880, p. 637), Prof. O. B. Johnson informs me that he did not see the bird; it was only described to him. The fact is the entire tradition of Black Phœbes seen north of the Umpqua Valley in southern Oregon, will not bear examination.

H. No. 37.

PASSENGER PIGEON.

A. O. U. No. 315. *Ectopistes migratorius* (Linn.).

Synonyms.—WILD PIGEON. MIGRATORY PIGEON.

Description.—*Adult male*: Upperparts and head all around bluish slate, purest on head and rump, with beautiful metallic iridescence,—purplish red and golden on sides and back of neck, glossed with olive on back, heavily shaded with olive-gray on middle back and proximal portion of wings; the outer scapulars and inner wing-coverts and tertials spotted or tipped with velvety black; primaries fuscous, with some gray external edging; *tail tapering*, its feathers graduated for more than half its length, the central pair of feathers blackish, the remainder white on exposed portions and below; chest and below deep vinaceous-rufous, fading thru vinaceous pink on lower breast and sides to white of lower belly and crissum; iris orange, surrounding skin red; bill black; "feet lake red, drying an undefinable color." *Adult female*: Similar to male, but brownish gray on head, paling on throat; underparts drab, fading to pale brownish gray on sides; iridescence of neck less marked; a little smaller. Length 15.00-17.50; wing 8.25; tail 8.00-9.00; bill .72.

General Range.—"Eastern North America from Hudson Bay southward, and west to the Great Plains, straggling thence to Nevada and Washington. Breeding range now mainly restricted to portions of the Canadas and the northern border of the United States as far west as Manitoba and the Dakotas."—A. O. U. 1895. Now rare and verging on extinction with breeding haunts, if any, unknown (1909).

Supposed Occurrence in Washington.—A somewhat careful examination of the Passenger Pigeon tradition, including the circumstantial account in the Auk, has convinced me that so far as Washington is concerned all alleged records are based on misidentification of the resident species, *Columba fasciata*.

H. No. 38.

GREEN HERON.

A. O. U. No. 201. *Butorides virescens* (Linn.).

Description.—*Adult*: Top of head and occipital crest glossy dark green (bottle-green); median line of throat and neck white, with admixture of greenish black posteriorly; remainder of head and neck white, with admixture of greenish black posteriorly; remainder of head and neck rich maroon-chestnut, the feathers more or less decomposed; lower neck

with lengthened bare space behind; general color of back and wings green, the interscapulars lanceolate and tapering, with a glaucous or slaty cast and with white shafts; middle coverts bright bottle-green edged with buff; greater coverts dull bottle-green edged with whitish; the primaries dusky slate, with glaucous and greenish reflections; the inner primaries and secondaries narrowly tipped with white; underparts slaty or brownish gray, with buffy or ochraceous washing, and irregularly outcropping white; bill dark green above, yellow below; iris and lores yellow; feet and legs greenish yellow. *Immature*: Occipital crest not so long; crown streaked with cinnamon; chestnut of neck not so deep, reduced in extent; back feathers unmodified, plain, glossy greenish; wing-coverts broadly margined with ochraceous, some of the feathers, with the outer scapulars, having wedge-shaped tips of buffy or whitish; underparts whitish, striped with greenish- and reddish-dusky, most heavily on sides of breast and neck. Length 16.00-22.00; wing 7.25; tail 2.70; bill 2.47; tarsus 2.05; middle toe and claw 2.00.

Recognition Marks.—Crow size; chestnut and greenish coloration above.

Nesting.—*Nest*, a platform of sticks placed at moderate heights in bushes of swamp or trees of neighboring orchards, etc. *Eggs*: 3-6, pale greenish blue. *Av. size*, 1.50 x 1.14. *Season*: May; one brood.

General Range.—Temperate North America from Ontario and Oregon, southward to Colombia, Venezuela, and the West Indies; Bermuda.

Supposed Occurrence in Washington.—*Ardea virescens*, J. M. Keck, Wilson Bulletin No. 47, June, 1904, p. 34.—“Not common summer resident.” Mr. Keck does not feel absolutely sure of his records but in view of the bird’s known occurrence in the vicinity of Portland he may well have been correct.

H. No. 39.

DOWITCHER.

A. O. U. No. 31. *Macrorhamphus griseus* (Gmel.).

Description.—Similar to *M. scolopaceus* (q. v. p. 648) but smaller, with underparts more lightly colored (less rufescent) and neck and breast with more of dusky speckling. Length of adult 10.00-11.00; wing 2.65; bill 2.30; tarsus 1.40.

General Range.—North America at large, or perhaps casual west of the Rockies; breeding in high latitudes; south in winter to Brazil.

Supposed Occurrence in Washington.—Recorded by Merrill as taken on the St. Joseph marshes of northern Idaho; hence strongly inferential for Washington. The early records (Baird, Cooper and Suckley, etc.) based on specimens still extant prove to have referred to *M. scolopaceus*.

H. No. 40.

BLACK-NECKED STILT.

A. O. U. No. 226. *Himantopus mexicanus* (Mull.).

Description.—*Adult male*: A white spot above eye and another below eye nearly meeting behind; forehead, region about the base of bill, rump, upper tail-coverts, and entire underparts, except lining of wing, white; tail ashy gray above; remaining plumage glossy, greenish black; bill black; eye red; legs and feet lake red (drying yellow). *Adult female*: Similar to adult male, but back and scapulars margined with buffy or whitish; the black of head and neck finely marked with the same. Length 15.00; wing 9.00; tail 3.00; bill 2.60; tarsus 4.20; exposed portion of tibia 3.25.

General Range.—Formerly the United States at large, now chiefly confined to the western interior, south to tropical South America. Breeds in U. S. range from Oregon to Texas.

Supposed Occurrence in Washington.—Recorded by Newberry as occurring north to the Columbia. It still breeds sparingly in southern Oregon and it may well have nested at an earlier day about the lakes of the Big Bend country in Washington.

H. No. 41.

NELSON'S GULL.

A. O. U. No. 46. *Larus nelsoni* Hensh.

Description.—Most like *L. glaucescens* (q. v. p. 713) but mantle lighter, as light as in *glaucus*; the tips of the primaries heavily crossed with slate-gray—hence darker in this regard than *glaucescens*. “A dubious gull” (Cones). Evidently difficult to distinguish from immature Glaucous-wings in which the gray of wing-tips is darker than in adults.

Range.—“Coast of Norton Sound, Alaska.”

Occurrence in Washington.—If migratory (and valid) will undoubtedly occur along our coasts.

H. No. 42.

MEW GULL.

A. O. U. Hypothetical List. *Larus canus* Linn.

Description.—Very similar to *L. brachyrhynchus* (q. v. p. 738) but with wing averaging longer and bill stouter; "bluish bases of primaries darker, not fading into white at their junction with the black, not running so far along the feathers, nor farther in the centers than along edges of inner webs" (Coues).

General Range.—Northern Europe and Asia; of doubtful occurrence along the Pacific Coast in winter.

H. No. 43.

GULL-BILLED TERN.

A. O. U. No. 63. *Gelochelidon nilotica* (Hasselq.).

Synonym.—MARSH TERN.

Description.—*Adult in summer:* Top of head and nape black; remaining upperparts light pearl-gray; primaries silver-gray over dusky, blackening on tips but with ivory-white shafts, and with some white on inner edge of inner web, the amount of white decreasing inwardly; tail slightly forked; remaining plumage white; bill rather short and stout, with conspicuous angle, and culmen decidedly curving toward tip,—hence like a Gull's—black; feet blackish. *Adult in winter:* Similar, but head and neck white with dusky gray spots before eye and on ear-coverts and grayish suffusion on hind-neck or with traces of black cap in variable proportions. Length 13.00-15.00; wing 12.00; tail 4.50-5.50, forked 1.25-1.75; bill 1.35; depth of bill at base .48; tarsus 1.30.

General Range.—Nearly cosmopolitan; in North America chiefly along the Atlantic and Gulf Coasts of the United States, breeding north to southern New Jersey, and wandering casually to Long Island and Massachusetts; in winter both coasts of Mexico and Central America and south to Brazil.

Possible Occurrence in Washington.—B. J. Bretherton in Bulletin No. 68, Oregon Agr. Exp. Station, 1902, p. 10—"A very common fall migrant" (at Yaquina Bay). Dubious, but if correct then bird certain to appear along the western coast.

H. No. 44.

CASPIAN TERN.

A. O. U. No. 64. *Sterna caspia* Pallas.

Description.—*Adult in spring:* Top of head and nape uniform lustrous black; upperparts pearl-gray, whitening somewhat on rump and posteriorly; wing-quills not especially different, the silvery gray nearly concealing dusky on exposed portions; inner webs plain grayish dusky; *tail slightly forked* for about one-fifth of its length,—folded wings considerably exceeding; remaining plumage white; bill very stout,—the depth at base being nearly equal to one-third the length of culmen,—bright coral-red, slightly tinged with dusky at tip; feet and legs black. *Adult after the breeding season and in winter:* Similar, but black of crown speckled or streaked with dull white. *Young:* Black cap of adult represented by spotting on top of head (on grayish white ground), increasing in density until nearly uniform on hind head; above dull pearl gray, sparingly spotted or barred with brownish dusky; primaries darker than in adult; tail pearl-gray with dusky subterminal spots, or indistinct barring; remaining plumage white, bill orange-red; feet brownish black. Length 20.00-23.00; wing 16.25; tail 5.00-6.50; bill 2.75; depth of bill at base .80-.95; tarsus 1.80.

General Range.—Nearly cosmopolitan; in America of irregular distribution, breeding north to Great Slave Lake, south to Lake Michigan, Virginia, Texas, Nevada, California and Oregon.

Supposed Occurrence in Washington.—Messrs. Bohlman and Finley have found large colonies of this species breeding on the lakes of southern Oregon and their former appearance upon the lakes of the East-side is highly probable. Cooper also doubtfully recorded the occurrence of certain large Terns seen at Shoalwater Bay under the title *Sterna regia* (Royal Tern) but they were probably of this species.

H. No. 45.

WANDERING ALBATROSS.

A. O. U. Hypothetical List. *Diomedea exulans* Linn.

Description.—Chiefly white; the flight-feathers blackish and the upperparts more or less varied by dusky. Of immense size; length up to 4½ feet; extent about 10 feet but 14 of record; wing 2 feet or more; tail 8.00; bill about 7.00; tarsus 5.00.

Range.—Southern oceans; of doubtful occurrence in Tampa Bay, Florida and off coast of Washington.

H. No. 46.

RODGERS'S FULMAR.

A. O. U. No. 86.1. *Fulmarus rodgersi* Cass.

Description.—Mantle dark as in *F. g. glupischa* (q. v. p. 895) but much restricted, the inner quills and coverts chiefly white; primaries chiefly white on inner webs, their shafts yellow. No dark phase known. Status of species not fully established—may be misunderstood phase of *F. g. glupischa*.

General Range.—"Bering Sea and adjacent parts of the North Pacific."

Occurrence in Washington.—Is sure to occur off our coasts in equal abundance with *glupischa*.

H. No. 47.

SLENDER-BILLED FULMAR.

A. O. U. No. 87. *Priocella glacialis* (Smith).

Description.—*Adult*: "Plumage white with clear pearly-blue mantle and black primaries, just like a Gull. Mantle beginning faintly on nape, continuing over whole back, rump, tail, wing-coverts, and inner quills; edge of wing slaty-gray; lining of wing mostly white; primaries black, their shafts yellowish-white at base, their inner webs pearly white to near the ends; white of first primary extending to within 2.00 of the tip, farther on the rest successively, reaching end of 6th; outer webs of secondaries slaty-black; a small dusky spot before eye; a faint pearly shade on sides of breast and body. Bill yellow; nasal-tube, hook, and sometimes base of upper mandible obscured with bluish horn color or blackish; feet pale flesh-color, obscured on outer toe, drying blackish" (Coues). Length about 18.50; wing 13.00; tail 5.25, graduated for 1.00; bill 2.00, depth and width at base .75; tarsus 2.00.

Range.—"Seas of the southern hemisphere, and northward along Pacific coast of North America to Washington" (A. O. U.).

Supposed Occurrence in Washington.—"The claim of *F. glacialis* to a place in the fauna of North America rests, I believe, solely upon the type said to have been taken off the Columbia River. If the specimen came from there as reported, the bird must be regarded as a very rare or accidental visitor to our coast, for none of the later observers have met with the species."—A. W. Anthony.

PUBLISHERS' NOTE.

Because "THE BIRDS OF WASHINGTON" has now considerably exceeded the limits of space originally assigned to it, it has been found necessary to omit the Bibliographies alluded to in the Preface. These would necessarily have been of a somewhat technical character and of doubtful interest to the majority of our readers, but we regret the possible disappointment of others.

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